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ABSTRACT

As part of a project of the Associated Colleges of the Midwest to strengthen relationships between liberal arts education and professional education in the health sciences, three reports were prepared by consultants. In "The Role of Distinctiveness in College Development," Burton R. Clark discusses an investigation he carried out in the early 1960s that focused on the character of Antioch, Reed, and Swarthmore and considers how the concept of organizational saga can be used in understanding other colleges and even universities. Five alternatives for linking traditional commitments and professional education are also discussed. In "Linking the Liberal Arts and Professional Education," Howard R. Bowen considers "learned professions" and the common characteristics they share that make a liberal arts education appropriate training for future practitioners. Three difficulties in linking professional and liberal learning concern lack of proper orientation, absence of packaged programs, and poor career counseling. In "Issues and Alternatives in Career Preparation and the Liberal Arts: An Initial Appraisal," H. Bradley Sagen examines three basic issues concerning the question of whether the liberal arts experience and preparation for a career should be incorporated within a single educational program. Three issues involved in the implementation of career preparation efforts within a liberal arts context, and three alternative models for designing career preparation programs are considered. (SW)

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Career Preparation in the Independent Liberal Arts College

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THE ASSOCIATED COLLEGES OF THE MIDWEST
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Career Preparation in the Independent Liberal Arts College

H. Bradley Sagen
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Associated Colleges of the Midwest

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FOREWORD

The worth of a liberal arts education is reflected eventually in the quality of life of liberal arts college graduates and in the contribution those graduates make to society. Such contributions are made most commonly in a complex society through specialized roles called careers; thus, career preparation constitutes a fundamental concern of the thirteen independent liberal arts colleges which constitute the Associated Colleges of the Midwest (ACM). To assist the efforts of member institutions in this important task, we have undertaken to strengthen relationships between liberal arts education and professional education in the health sciences through a series of cooperative relationships with Rush Medical, a distinctive university in Chicago specializing in the health professions. The most tangible result of these efforts has been the establishment of a cooperative program in nursing involving twelve ACM institutions. Similar programs in several allied health science areas are being developed.

An important portion of the project has involved clarification of the special role of the independent liberal arts college, the relationship between liberal arts education and professional preparation, and the nature of career preparation within the liberal arts experience. ACM faculty members and administrators have met extensively with Rush University leaders and with several prominent educational consultants to discuss these issues. The reports of three of the consultants are presented here for their possible interest to the academic community.

Portions of the project, including the preparation of this report, were made possible by a grant from the Fund for the Improvement of Postsecondary Education (FIPSE). Preparation of the report was supervised by Professor H. Bradley Sagen of The University of Iowa who served as ACM's chief consultant. I particularly want to acknowledge President James A. Campbell and Dean Luther Christman of Rush University who conceived and developed the several cooperative programs with which the Associated Colleges are affiliated and who gave major direction to the several conferences from which this report was compiled. Together, we have launched a long-term experiment to link liberal and professional education in ways which might enrich both elements while preserving their separate integrity.

Dan M. Martin
President
Associated Colleges of the Midwest

Chicago, Illinois
September 22, 1978

THE ROLE OF DISTINCTIVENESS IN COLLEGE DEVELOPMENT

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Early Studies: The Antioch, Reed, and Swarthmore Sagas

My interest in the role of distinctiveness in the development of colleges began with an investigation carried out in the early 1960s that focused on the character of Antioch, Reed, and Swarthmore (Clark, 1970, 1971, 1972, 1973). The educational problem of that study was to ascertain how several colleges had evolved into institutions that were widely regarded as first rate. The sociological problem was to understand how particular values become embodied in the workings of the organizations through which they must be effected if they are to be realized in society. The values in question were those of liberal education, which were most likely to be expressed in the United States in the independent liberal arts college and the undergraduate college of arts and sciences within the university. The general method of the three-college study was historical, searching for the origin and subsequent development of an institutional emphasis or point of view. One part of the task was to look for a key stage of development during which the institution set a new purpose or mission for itself, and then to explore the conditions under which that occurred. The conditions turned out to be three: that of new organization, which appeared at Reed; the revolutionary setting of deep crisis, which was the case at Antioch; and the condition of evolutionary change, which happened at Swarthmore.

I then wanted to know who the people were who had introduced the new purpose, and, despite my wish to avoid a great-man explanation, this turned out to be one or two persons in each of the colleges. The first two presidents at Reed, William T. Foster and Richard F. Scholz, had clearly exercised strong leadership between 1910 and 1924 in working out the set of purposes that became the Reed ideals. Arthur Morgan, highly charis-

matic, had defined the terms for the transformation of Antioch into a vigorous institution during the 1920s, after a half-century of weakness and deserved obscurity that had led the institution to the brink of bankruptcy in 1920. Frank Aydelotte, also charismatic but more diplomatic than Morgan, brought to the Swarthmore presidency his own ideas on how to develop an Oxford-like honors commitment in an American college and, in an established institution that was neither in crisis nor seeking a revolution, persisted for two decades (1920-1940) in operationally adapting and effecting his initial ideas.

But then it turned out that there was an equally important role for the group, for the many who work in the institution and those who pass through as students; for while special purpose can be conceived and initiated by one or two persons, it always takes a much larger number of people to work out the change, embody it in the ongoing activities of the institution, and especially to carry it on after the departure of the initiator(s). The agents of embodiment are particularly the senior faculty. If they do not believe in the new direction, then it will attenuate; if they fall in line, especially if they become True Believers, then they become the primary carrying mechanism for at least several decades—that is, long enough to work out the possibilities of the new plan and to model it to the rest of the world. Trustees, alumni, and students also become involved. The new alumni become the most extreme of the True Believers, followed by the students who self-select themselves to the college in the first place because their understanding of its special qualities. One encounters the irony of radical students becoming zealously conservative about protecting the established character of their institution.

What finally seemed most important in the evolution of these places over several decades to their special standing among some seven to eight hundred liberal arts colleges was the working up of a system of belief that was historically grounded in a common effort. No particular program or bit of structure was crucial: all the specific items that are endlessly debated by way of freshman seminars, sequences of courses, senior-year requirements, department versus divisional organization, were not in themselves of any overwhelming importance and could vary almost endlessly. What counted was the integrated meaning assigned to the bits and pieces, the way in which the participants saw their practices as the expression of a unified and unique approach that had been devised by hard work and struggle. It was their belief that counted most, their special sense of an institutional self, a phenomenon that could be referred to as an organizational saga or legend. The faculty, the students, and the alumni came to hold in

common a credible story of uncommon effort and achievement. The story was not always accurate, since it was highly selective and exaggerated. But it did have important ingredients of truth and was indeed based on a historical reality.

Thus the organizational saga was a collective understanding of current institutional character that referred to the history of the group and was embellished and romanticized and loaded with meaning to the point where a mere organization became a beautiful end-in-itself. Antioch and Reed were each heavily possessed by the phenomenon, strongly tinged with a sense of hard-won uniqueness. The Swarthmore faculty had actually coined the term "the Swarthmore saga" in paying tribute to Aydelotte. From what I learned in the study of these three colleges, the building of self-belief seemed central to the achievement of a distinctive place amidst a crowd of institutions.

The Organizational Saga: Advantages and Disadvantages

Since the completion of that study, I have been interested in how the concept of organizational saga can be used in understanding other colleges and even universities. For one thing, the phenomenon is clearly a matter of degree, rather than all or nothing: the three institutions that I studied were simply extreme cases. The concept becomes more broadly useful when we think of a phenomenon ranging along a continuum from zero to one hundred, and, within large categories, of organizations constructing a saga in weak, moderate, or strong degree. Even a predominantly pragmatic and instrumental organization probably develops a legendary explanation to some slight degree, if personnel turnover does not destroy all continuity of group connection. Those who have worked together for a decade are likely to develop some shared feelings about their organization, a set of beliefs that help to define their place in life and give meaning to the fact of having contributed so much time and effort to a particular institution. All organizations are potentially integrated by symbolic and emotional bonds to some degree as well as by such instrumental bonds as the paycheck and other material rewards. The meaning provided by shared symbols gives people additional rewards for having contributed so much of themselves. But there are broad classes of organizations that are considerably more normative in nature than business firms (churches, colleges, welfare agencies) and are more inclined to stress the symbolic side of organization. Further, there are some organizations, such as many colleges in the private sector of American higher education, which are forced by the competitive

situation in which they find themselves to deliberately promote an institutional legend. Particularly in this sector, we should find organizations ranged along the middle to high parts of the continuum of saga building. There is a strong propensity among American liberal arts colleges to manufacture self-belief: the first pages of the college catalog speak eloquently to this point.

A second point that can be raised as we think of further exploration and general application is the balance of advantages and disadvantages of constructing an organizational saga. The advantages are clear in what has already been said. The belief system exacts loyalty and commitment from individuals: they cease to watch the clock, as they seek to make "their" organization more effective in their agreed-upon conception of what it should do. They do not leave when they have a better offer. Then, their shared belief helps to turn the organization into a community, emotionally warming the institution and giving individuals a sense of place. That is no mean trick in modern society with its fragmentation of group ties, the erosion of geographic community, and the rapidity of social change. Thirdly, an organizational saga offers advantage in the extent to which it constitutes "moral capital" for an institution. When we think of the character of individuals, we know that individuals vary in capacity to see their way through severe psychological or physical strain. One's established character helps to determine one's reaction to crisis or trauma and hence shapes what character will be like after the troubled days. Some people are made stronger by a crisis situation that defeats others. Similarly, we can think of institutions heading into troubled times with quite different characterological abilities to survive and be strengthened by the crisis. Characterological strength is much more than a matter of money, of the financial capital of the institution: the people's depth of belief in the institution's value makes all the difference in the world in the days of institutional illness and decline. The troubled days of student protest in the late 1960s hit institutions quite differently according to their characters. Some that were weak in self-belief and quite fragmented were severely ripped apart. Others that had strong self-belief, and were relatively united around that, went through extremely troublesome days but were able to snap back relatively rapidly and to feel that they had been made all the stronger by the common experience of working their way out of the troubled waters (Clark, 1973). In short, a saga is a great resource in itself, deposited in the bank of institutional morality as an account on which one can draw without going bust when turndowns occur. Obviously this point applies to the situation of economic turndown, which, in living memory, we experienced deeply in the 1930s and are now experiencing in modest degree in the 1970s.

Finally, a great advantage of a sturdy institutional belief is the way it serves as a bridge to the outside world across which resources flow. Especially in competitive arenas, the institution that believes deeply in itself, and has at least a small social base of believers on the outside, has some advantage in raising funds and attracting students and faculty members. The saga is an institutional reputation as well as a self-image. We still know much too little about the public images of specific colleges, since academicians like to avoid topics that smack of "public relations," and organizational analysts have concentrated on structural and instrumental aspects of institutions. But reputation is important in nearly all sectors of organizational life and especially in those realms where resources must be "privately" assembled. Distinctiveness is a claim on resources.

When we turn to the disadvantages of an organizational saga, at least two imposing ones come immediately to mind. The first is the hazard of the specialized niche in the ecology of similar organizations. It is clear why so many organizations in both the public and the private sector seek to diversify and to pursue the route of a comprehensive instead of a specialized organization. It is a way of hedging one's bets, of protecting the viability of one's own organization against sudden changes in the environment that might make any one function obsolete. The public secondary school in the United States has gone the route of the comprehensive organization and attempted to be many things to many people. Business firms time and again find it prudent to diversify. (Everyone can remember what happened to the New England textile firm and more immediate lessons are always at hand.) This point bears on the narrowness or breadth of purpose in liberal arts colleges. If one chooses the path of claiming a sharply distinctive role, then one must live with the hazard of putting all of the eggs in one basket. One cannot sit and flexibly orchestrate a set of roles, emphasizing first one and then another as environmental change suggests a shift in priority. A saga generally freezes priorities, although again there is great variation in the degree of rigidity, and even the content of the saga can make a difference. For example, the Antioch self-belief has been more open than the Reed self-image to experimentation and even structural change, since from the beginning it encouraged such nontraditional actions as giving credit for off-campus work and the experience of living with a farm family in France.

The second major disadvantage, closely related to the first, is rigidity in competence. We all know about tunnel vision: a way of seeing is a way of not seeing. The narrowly-focused specialist is surrounded by his trained incapacities. The same may be said for the specialist institution, especially

if it is full of pride about its distinctive accomplishment and is publicly perceived as particularly good at a particular thing. Competence is then narrowly staked, with tradition, vested interest, and ideology helping to ensure that any shift to new duties and points of view will be a wrenching and sometimes impossible business. An intense sense of craft is a great thing—until an organization wants to shift from one craft to another or transform craft workers into assembly-line workers. This is generally so hard to do that it is preferably done by turnover of personnel rather than by exhortation and retraining of existing staff. But then personnel turnover is not really possible where union seniority, civil service position, or academic tenure provides job protection. A tenured senior faculty highly competent in a collegiate specialized task and carrying a unified belief about a distinctive role can be fairly unshakable. It is not easy to induce those who have developed, over two to three decades of hard work, an intense commitment to a particular interpretation of the liberal arts, to change their minds in the course of five or ten years to a quite different definition.

Distinctiveness is not always necessary: the balance between the disadvantages and advantages may tilt too much to the negative side. Particularly in the public sector of American higher education, a zealous pursuit of special organizational character may not be the best thing. A certain diversity of approach may be needed in relating to many publics within the general public. Making common cause with sister institutions in a state system may be necessary, to avoid risking their revenge on a prideful deviant who asserts his or her difference. Yet even in the state-supported sector, this "safe" game has its own set of dangers. When a general turndown occurs, the nondistinctive institution has no special claim on resources other than the "sunk costs" of the budget. As a duplicate part, interchangeable with other parts of the system, *it* may be the redundant unit selected by budget cutters for major surgery or a bankruptcy sale. It is also now the case that various individual states are inclined to attempt to plan for diversity among the campuses of the state system and therefore to reward those campuses that reach for distinctiveness rather than sit in a comfortable uniformity.

Choosing the Distinctive Approach: The Need for Leadership

Despite the difficulties and disadvantages of a saga-based distinctiveness, there is strong warrant for this route of development in the private sector of American higher education, and more so among the small colleges than

the large universities. There is no other sector in any other system of higher education in the world in which market forces and the crush of competition among institutions has a larger role, with the possible exception of the private sector in the Japanese system which, virtually without endowment, has carried the burden of mass higher education and is only now coming under state support. It is surely the case in the America of the 1970s that many private colleges must raise the fundamental characterological question of whether or not to reassert their differences from public institutions. If not, then the direction of institutional drift will be toward quasi-public status or absorption into the state systems. Since public funds may well seem essential in one case after another, claimed similarities and differences become a tricky business.

The situation clearly requires some institutional leadership. If institutional difference is to be faced openly, one person or a relatively small group must be asking the question, what is possible? What special mission can we set for the institution and hope it will embody in its future performance, given its current competence and readiness to move and given the environmental demands of the present period and the anticipated future? Responsible institutional leaders will attempt to avoid the opportunism of zigging and zagging according to the latest pressures, and, on the other hand, also avoid an effort to establish a utopian mission that is not really possible given the existing internal and external constraints. The first task of leadership is to imaginatively develop realistic purpose by testing ideas against the possibilities of one's own unique setting. Big thinkers in national commissions, study centers, and research institutes cannot perform this task, since their large recommendations cannot possibly take into account the specific limitations and potentialities of the individual institution. They can at best provide laundry lists of possible emphases and lines of development. In a system of dispersed control, choice is local. An informed choice of distinctive approach must, in any event, face the reality of the institution's historical stream of experience and current social setting, which have some features in common with other places but, in totality, will be unique. The point is that one either attempts to choose or one drifts. And the hard work of defining and redefining purpose must be done at home.

Linking Traditional Commitments and Professional Education: Five Alternatives

To put these general considerations into more concrete terms, I wish to suggest five alternative doctrines that a liberal arts college might consider these days if it faces the general problem of trying to adapt the traditional

commitment to the liberal arts to some combination of education and work, or at least to a partial commitment to professional education. There cannot be a single answer: those who offer only one way for all are quite properly known as fanatics. But we can exercise our imaginations about a range of answers, each of which, when further detailed and adjusted, might fit the situation of an institution and become a legitimate doctrine. These ideologies range along a continuum from traditional purity to entirely new molds of orientation and organization.

The Liberal Arts Forever

The first doctrine stresses a stubborn defense of the traditional liberal arts. It finds virtue in working vigorously against the mainstream of American higher education. We are being told that the young are now career-minded and want a relevant education; new clienteles are available if we will only swim with the tide of part-time study, off-campus learning, and credit for experience. Well, we do not want any part of it: to give our colleges over to careerism will be to cheat our students. We are also against large size and the mass education that goes with it. We intend to be among the small liberal arts colleges that are still extant in the year 2000 and we are going to persist by offering a sharply-defined alternative rooted in the ideals of the American college. This doctrine ought still to be a viable one, despite some recent loss of nerve, if it is vigorously restated and implemented with new determination in settings still appropriate for it.

The Educated Man Explores Careers

The second doctrine is more adaptive than the first. It would emphasize that the liberal arts college remains primarily committed to the liberal arts, but that it also quite sensibly understands the importance of young people's better understanding the nature of the modern world of work. We have often not prepared them very well for that world, leaving them confused and even paralyzed. Hence it is an intelligent adaptation of our traditional position to say that we will help students with some career experimentation toward their developing a better mastery of critical choices. We could surely work up a cogent statement of adjusted purpose for a liberal arts college along these lines. It would actually involve less of a breakaway from traditional liberal arts conceptions than what Arthur Morgan and his associates attempted at Antioch over a half-century ago. But it, too, could be made a rigorous doctrine, one particularly appropriate for a setting of evolutionary change where participants are ready to try their own definitions of the best combination of the old and the new.

The Perfect Balance of Education and Experience

Those among us who want to work up this doctrine might think of it as the 50-50 formula. We recognize the importance of learning by experience and practical training as well as by instruction in the classroom. We want the young to have the best of the two worlds of education and work. We take seriously the research on personal development which shows clearly that the young, maturing earlier but also at quite different rates, are ready for learning by instruction or by experience at different times (Coleman et al., 1973). We need more flexible programs, therefore, adjusted to this basic fact of modern life. For some young people, their general education is largely completed by the end of high school: the countries of the Continent have long treated liberal education in this way. For others, liberal education extends through the first two years of college; for still others, all four years of college; and then there remain those whose liberal education will best occur when they are older and have returned to education. We will, therefore, help devise alternative ways in which preprofessional programs can be inserted into the current educational ladder, and be prepared to combine preprofessional programs with liberal arts studies. We will be prepared to accept some older adults—in fact it turns out we have been doing some of that anyway! This third doctrine may well be an appropriate direction of effort and evolution for colleges that cannot count on surviving if they remain rooted in the more traditional definitions. It offers room for new thinking, new commitments, new structures and programs.

The Brave New World of Experience First, Education Second

Some private liberal arts colleges may want to attempt a special institutional version of what is now known as recurrent education. If we are going to make it possible for people to move back and forth between the settings of education and the settings of work, then educational structure after the age of eighteen, and possibly after fourteen, will need to be adjusted. There must be the possibility of stepping out of the educational setting for various periods of time, either as a part of the day, the week, the month, or the year, or as an alternation of years and blocs of years. Therefore, our institution will offer students a number of options: go to work first for a few years, and then come to us; take a preprofessional program, go to work and you will still find us ready to consider you; join our eight-year, half-speed program while working; etc. An institution could work up an exciting doctrine in this direction. When the time comes for recurrent education, and it possibly has already arrived, are private liberal arts colleges going to let the other sectors of American higher education walk off with the whole thing?

The Lifelong Open Door

Only a short step down the road from the fourth doctrine is the hearty assertion, one easily blessed with utopian overtones, that liberal education should be available throughout the life cycle. The college so possessed would say to persons of all ages: "Come to us and we will design an educational program that will fit your personal needs, within the limits of what we understand to be the liberal arts." Having taken this path, we would have to admit quietly to ourselves that the institution will need to involve itself in much remedial work, since the preparation of many students will be deficient. But the truth would be on our side: many institutions in the United States, including noted state universities, have long taught "bonehead English" to thousands of entering students; there are now well-known institutions teaching eighth- and ninth-grade arithmetic to their new students in what amounts to a subcollege or prefreshman year. Aware of all that, we could carefully work out a doctrine that would say we too will do such things when appropriate for the older or poorly-prepared student, but we will do it more carefully, with more individual attention. To boot, we will let you in on all the good features of a small college, such as our location on a hill overlooking a lovely green valley, in a spot that combines rural charm with urban convenience! Given a cold recognition of the great variety of activities that now occur in American "postsecondary" education (dropping the "higher" label), and what goes on *within* the comprehensive institutions that now attract the great bulk of students, smaller colleges might fashion a commitment around the general notion of a broad avenue of learning for all those, older as well as younger, who are ready to taste the ecstasies of liberal learning. On this score, bold institutional leadership might even test the ground anew for experimenting with liberal education at the graduate level. Why not reverse the usual situation, where the specialization in which the university excels penetrates the undergraduate years of the liberal arts college, and instead have the general education in which the college excels penetrate the graduate level? The universities themselves may not be able to do that very well, leaving a special role for the liberal arts college that is willing to move into the first year or two of work beyond the bachelor's degree.

All such doctrines remain idle speculation until pursued seriously by those who have a hand in deciding directions of effort in one or more institutions. But by giving more consideration to alternative missions, by restoring choice of purpose to consciousness, we stand a better chance of steering institutional development. A saga begins as a mission, the active step of setting purpose that leaves behind the passive acceptance of assigned roles.

That is the first step in realizing the advantages that distinctiveness offers to the private college.

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LINKING THE LIBERAL ARTS AND PROFESSIONAL EDUCATION*

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Liberal Arts Colleges as Training Institutions

There has been a good deal of misunderstanding and some hypocrisy in liberal arts circles about professional education. There is a kind of tradition in liberal education that anything useful is somehow illiberal and anything liberal cannot be useful. But, in fact, liberal arts colleges have dabbled in professional education or vocational education for many years. For example, most colleges have teacher-training programs of one kind or another which they tend to turn on or off depending on the market situation. Some colleges have programs in speech therapy, journalism, professional music, and even engineering and accounting. These programs have never been handled very well in my judgment and are often the special project of a qualified and interested faculty member. These courses have always had an uncertain status, and in prosperous times, when we think about purifying the liberal arts curriculum, we often try to eliminate them.

In struggling times like the present, we begin to look more kindly upon professional programs, but in a deeper sense, the liberal arts college, even though it has claimed academic purity, has always been and certainly is now a professional training institution. The professions for which it provides training are the learned professions. Although liberal arts colleges pride themselves on the number of students they send off to graduate schools, they neglect to mention that what they are actually doing is preparing people for professions of college teaching, research, medicine, law, dentistry, or business. So the pretense that liberal arts colleges are not involved in vocational education is something they ought to eschew. Instead

* Adapted from a presentation [illegible] nference of the Associated Colleges of the Midwest and Rush Medi[illegible]versity.

the honest position is that the best preparation for vocational and professional training is liberal education. There is no inconsistency between being keenly interested in liberal education in the pure sense and at the same time recognizing that we are involved in vocational and professional education.

The Learned Professions

What are these "learned professions," and what common characteristics do they share which make a liberal arts education appropriate training for future practitioners?

The learned professions are those vocations that are founded upon broad liberal education in the humanities, social studies, and natural sciences, and which involve application of these disciplines to practical affairs. Their common characteristics are several:

- Most of the learning of these professionals occurs through experience and life-long study rather than through formal training. Formal university courses help to orient the youthful aspirants and prepare them to begin their careers; mastery of the professions usually comes much later through continuous study, practice, and maturity.

- The learned professions are subject to rapid changes in both theory and practice as new knowledge is discovered and new conditions arise making specific practical knowledge highly perishable. To cope with obsolescence, the education of the professional person must concentrate on the fundamentals which underlie the profession rather than on the details of practice, on the means and the motives for keeping up to date rather than on the latest practical techniques or the latest legislation. There is no future in the trade school approach to any of the learned professions. All professional education must be designed to produce a flexible, versatile, intellectually-curious person, not one who knows only the current tricks of the trade.

- These professionals carry heavy responsibility for the welfare of other persons. When a doctor performs surgery, a nurse assumes responsibility for a ward, a lawyer defends a client, an engineer designs a bridge, a businessman organizes a company, they hold positions of trust in which other persons are dependent upon them. Professional men and women, therefore, must be persons of ethical and humane sensibilities, who are fully aware of the implications of their decisions and actions.

• The members of the learned professions are inescapably involved in a variety of intimate human relationships. To be successful they must possess an understanding of people and a sympathy for them, plus an objectivity which keeps professional judgment from being clouded by emotion or sentiment.

• Finally, members of the learned professions are often placed in positions of civic and political leadership and are therefore obliged to have some understanding of public affairs and social issues.

In order to measure up to these requirements, persons who engage in the learned professions must be men and women of versatility with broad learning and depth of knowledge in whatever basic sciences and arts underlie the professions. Professional education is foundation building. The young aspirant for any of the professions should be well educated and have enough practical know-how to get started in the first job. As John Stuart Mill said in his much-quoted statement, "Men are men before they are lawyers or physicians or manufacturers; and if you make them capable and sensible men, they will make themselves capable and sensible lawyers and physicians."

Professional education, then, should be constantly examined to determine whether existing programs are sufficiently broad, whether they provide adequate mastery in the underlying arts and sciences, and whether the graduates are sufficiently versatile to keep pace with future developments. If existing programs do not meet these demands, colleges may need to consider lengthening the period of professional study, offering more liberal studies concurrently with professional studies, introducing more liberal learning into professional courses, or some other solutions which will help make liberal learning a good foundation for professional study. But whatever solution is chosen, the demands need to be met, and each professional college might well devote some of its best thinking to reaching better solutions.

When we start searching for solutions, however, we must be careful not to confine our thinking to the obvious links between professional and liberal studies. In the area of nursing, for example, the basic arts and sciences underlying the study of nursing make up a long list. They include education, sociology, physics, chemistry, biology, and psychology. But there are others as well. It may be, for example, that an understanding of literature and history will help the nurse deal with human problems just as much as a knowledge of psychology; that an understanding of education is as useful as the

knowledge of science; and certainly the nurse in the role of civic leader must have a grasp of economics and politics and history. Indeed, it is difficult to find any subject that is not relevant to the work of nurses—or the work of doctors, lawyers, or businessmen. Liberal education is not just highly relevant to these professions; it is the base of professional education. Professional education is really a particular approach to liberal education.

Toward a Successful Program

Essentially, we have failed to establish successfully a link between professional and liberal learning for three reasons, (1) lack of proper orientation, (2) absence of packaged programs, and (3) poor career counseling.

Much of the problem is one of orientation; we need to help students—and perhaps faculty—see the relation between liberal education and careers. If there is any place where we have failed in the liberal arts colleges, it is in helping students to see this relationship. We tell students that liberal education is good for them, but our concern for keeping education pure and uncontaminated by practical applications does not convey to students that this kind of education has applicability far beyond teaching or research, and is in fact the best way to train people for the professions.

A second thing that we have failed to do, in my opinion, is to package our programs. We may have specific packages called "premedicine" but we seldom put together groups of courses or programs of study which are part of a legitimate liberal education and at the same time carry students toward their particular vocational goals.

A packaged program for business, for example, would demonstrate to students that a liberal education is relevant to a future career in business and show them how the liberal arts curriculum can be used appropriately to plan business careers. It would first help them choose a course of study or major, often a difficult problem for business students. The history of successful businessmen clearly shows that many different courses of study can lead to success in business, but as a general practice, each student should be encouraged to concentrate in those fields which are the most interesting and challenging to him or her. This encourages a maximum development of the student's basic abilities, especially the ability to learn, which can be readily transferred to the life-long task of learning "on the job." For business students, the selection problem is minimized by the relevance of many different courses to business careers. Courses in science and mathematics, for example, will help future businessmen understand modern technology

and be competent in dealing with problems of production and with research and development activities. Courses in psychology, sociology, education, and literature will facilitate understanding in dealing with problems of human relations and personnel. English, journalism, and speech aid effective communication, and the study of foreign languages will help potential businessmen conduct business operations abroad. Political science will help them to understand government and the manifold relations of business to government, while economics will enable them to analyze economic conditions, and to see the effect of business decisions upon the economy at large. The study of history provides perspective on long-term trends and developments, and understanding of the great social movements that shape the evolution of our business institutions, as well as the social climate within which business operates. Finally, philosophy, religion, and the humanities will help to give them the moral orientation needed if they are to exercise their influence widely. In other words, the whole matter may be summarized simply by saying that businessmen should be well educated. The packaged program should also include a series of courses specifically intended to help students gain an understanding of business as one of the leading institutions of our society and to give them perspective on the relation of business to the social environment within which it operates. These courses should not be technical or vocational. They should not teach students how to function in business. They must be liberal arts courses in every sense, and should be appropriate electives for students who have no intention of entering business, while at the same time being particularly relevant for students who expect to embark upon business careers.

The third area in which we are failing to help our students is in career counseling. Counseling is extraordinarily difficult; most of us are very cautious about intervening in the lives of other people. The career area is highly fluid, and most of us are not well informed in this area. As a result, we do not feel qualified to counsel, and do not give our students the kind of perspective and assistance that might help them in making career choices.

With better counseling, packaged programs, and a more consistent attitude about career preparation, students will feel more comfortable about their own interests in professional studies, and professional education will become a genuinely alternative approach in liberal education.

Sample Programs

Programs should introduce more liberal concerns into the professional

studies and more quasi-professional study into liberal education. A medical program, for example, might admit freshmen right out of high school and carry them through the M.D. in six years. The undergraduate part of the program could be organized around the concept of human biology, the idea being to bridge the gap between so-called premedicine and medicine. Students could begin studying science courses related to medicine in their freshman year, and begin the study of clinical medicine as seniors. Instead of studying general biology as is now done in premedical programs, students would be studying human biology which would integrate the various medical basic sciences such as biochemistry, anatomy, and physiology. In this four-year program they would have an opportunity to take a large number of courses in the humanities and social studies, and some initial clinical courses. At the end of four years they would receive the B.A. degree in biological science with an emphasis on human biology. At this point, they would have several options: (1) terminating formal education as though they had majored in biology in the conventional sense; (2) moving on to nursing, pharmacy, dentistry, or any number of other health professional fields; or (3) going right on through medical school and receiving the M.D. in two more years of study. Moreover, the field of human biology could be open to all students as a major or an elective science course.

A law program could follow a similar pattern. The student would be admitted to the law school as a sophomore. The specific admission requirements would be minimal. The student would begin the study of law as a junior, taking two courses in law during that year: one in criminal law and procedure along with closely-related courses in psychology and sociology, and the other in constitutional law, along with American constitutional history. This pairing of courses would go on through the three years of legal study, so that the students would take a course in legal process along with philosophy of law, and study torts at the same time they took a course in economics related to risk. Law would also be open as an undergraduate major, and at the end of four years, students would have the option of stopping at the B.A. or going on to law school.

There is also a very large demand for master's programs that are quasi-professional or relate to the desire of people to extend and continue their liberal education. For example, a master's program in urban studies made available to public officials like city managers, chamber of commerce executives, and others interested in city development would teach people about urban issues in a way someone might deal with these issues in a liberal arts college. It would essentially be a course in economics, but somewhat broader

than the typical undergraduate course. A comparable master's program would be one in business administration for young executives.

Programs such as these perfectly exemplify the integration of professional and liberal education. One can hardly tell the difference between what is professional and what is liberal. The theory is that everything taught that might be called professional would also have a substantial liberal content.

Conclusions

The relation between liberal education and professional education is a close one, and even closer ties would prove mutually beneficial. To an institution faced with the problem of bridging this gap between the two extremes of education, I would make several recommendations.

First, the aggregate time span of the liberal and professional programs needs to be shortened. Most professional educators feel that their programs in the aggregate are too long. But this raises the question of which part should be shortened—the liberal part or the professional part. In answering that question, we should remember that student concern about careers is legitimate, and that vocational interests are important motivators of which we have not yet taken full advantage.

Second, traditionally, when liberal arts colleges have become involved in professional fields, they have done poor work. There is a great need to help students make connections. Guidance, packaging, orientation, and placement are crucial to improve articulation between liberal and professional studies.

Finally, we should remember that our liberal arts colleges are generally small institutions. Although we should do whatever we can to link liberal education and career preparation, we should avoid trying to do everything. Each college needs to examine its particular field and its special potential. Only then can it choose those plans, solutions, and programs which will aid professional education without compromising basic liberal arts traditions and objectives.

ISSUES AND ALTERNATIVES IN CAREER PREPARATION AND THE LIBERAL ARTS: AN INITIAL APPRAISAL

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Introduction

Liberal education must address the question of career preparation as an issue vital to its own survival. Liberal arts graduates are experiencing considerable difficulty in securing employment appropriate to their educational attainment; and because of the lack of career preparation, students are deserting liberal arts programs in favor of more vocationally oriented curricula. Unless liberal arts colleges can more effectively prepare students for meaningful careers, their enrollments will be limited to a relatively few affluent students, and to those high-ability students clearly preparing for advanced graduate and professional schools, who can afford to invest four years in undergraduate education without concern for immediate employment upon graduation.

Properly conceived and balanced, liberal arts education and career preparation can complement and strengthen one another without compromising the basic intentions or effectiveness of either. By emphasizing its own basic intention and strength—the development of reasonably complete and competent human beings whose lives are informed and liberated by a breadth of perspective and understanding, who are competent to analyze and resolve complex issues, and who are characterized by the development of a personally wrought system of values and by important qualities of humanness such as empathy and openmindedness—a liberal arts education can effectively prepare students for future careers.

If liberal education and career preparation are to be effectively linked and the undergraduate experience is to remain a vital component of the broader educational enterprise, some reorganization of liberal arts education must take place. To date, the response of liberal arts colleges to the current job market has involved relatively peripheral considerations such as the addition of a career counselor and improvement in placement services. The position advocated here is that improving career preparation within liberal arts education is essentially a curricular question and that the solution must involve all facets of the instructional program.

In this essay four major propositions have been employed to formulate a mutually supporting relationship between the liberal arts and career preparation:

1. The liberal arts have a responsibility for developing the specialized knowledge and skills needed for entry-level positions appropriate to a liberal arts degree and for laying the foundation for a pattern of career development appropriate to the student's interests and abilities.

2. Liberal arts education must become more competency based, focusing on the development of analytical abilities appropriate to a wide range of life tasks rather than the current preoccupation with more narrowly focused forms of academic scholarship; colleges and universities must accept responsibility for credentialing career competencies and devise more effective methods to communicate these credentials to prospective employers.

3. Career development should be considered part of a broader pattern of personal growth and development. The liberal arts experience seeks to develop important personal qualities such as expanded self-awareness and humane values. Careers, the specialized roles individuals play in society, offer a major vehicle for the further development and expression of such qualities. Development of reasonably complete human beings within a complex society thus requires career preparation to provide maximum opportunity for fulfillment of human potential.

4. Liberal arts faculty must accept the responsibility for linking their disciplines to practical affairs and for demonstrating the contribution that breadth of understanding and humanistic perspectives can make to occupational tasks.

This essay should be considered a working paper. It seeks to identify some of the major concerns and to provide some initial proposals. Many

issues remain unresolved and the proposals should be regarded as tentative at best. To the extent that this preliminary formulation assists others pursuing similar efforts, the project has achieved its goals.

The paper consists of three major sections. The first section examines three basic issues concerning the fundamental question of whether the liberal arts experience and preparation for a career should be incorporated within a single educational program. These issues are (1) the nature of the job market for liberal arts graduates, (2) the several philosophical issues underlying the relationship between liberal arts education and career preparation, and (3) the research evidence regarding the compatibility of the liberal arts and career preparation. The second section discusses three issues involved in the implementation of career preparation efforts within a liberal arts context: (1) the question of the actual relationship between theory and practice, (2) the possible role of competency as a link between the liberal arts and career preparation, and (3) the topic of vocational development in college students. The final section examines in more detail the problems of designing career preparation programs within liberal arts institutions. Three alternative models are presented, and three elements—(1) career-related courses, (2) field experience, and (3) career counseling and placement—considered necessary to an effective program are discussed. Finally, the possibility of adding selected occupational majors within predominantly liberal arts institutions is explored.

Basic Issues

The Job Market for Liberal Arts Undergraduates

Projections. One of the major factors influencing institutional responses to the employment problems of liberal arts graduates is the institutions' assessment of the severity and duration of the current situation. The following very preliminary analysis suggests that the current "surplus" of college graduates will continue and that some fundamental shifts are occurring among the areas of potential employer demand. These conditions will require significant changes on the part of institutions, although certainly not the abandonment of the liberal arts as suggested by certain critics.

The nature of the labor market can be explained in terms of two major dimensions: (1) the *aggregate* (total) *demand* for workers, and (2) *structure*, or the distribution of workers among occupations. Although most of the attention of educators and students has focused on the overall supply and demand situation for college graduates, the current and projected

structural conditions also appear important, especially for liberal arts graduates.

Assuming that the economy has bottomed out and that the next several years will see a return to moderate economic growth, there appears to be a basic consensus regarding the *overall demand* for college graduates. Between 1972 and 1985, eighteen million jobs of the type traditionally occupied by college graduates will be created, with more than half of these being replacements of current workers or the result of new occupations requiring a college education. Competing for these eighteen million jobs will be an estimated twenty-two million college graduates. Comparison of supply and demand results in a projected annual surplus of approximately 25 percent, which constitutes the core of the overall employment problem for college graduates (O'Toole, 1974).

Assuming the accuracy of these estimates, two possibilities for college graduates emerge. Hopefully, a sizable portion of the 25 percent surplus will find positions not previously held by college graduates and will, because of their greater competency, increase the economic return (productivity) of the positions. Unfortunately, most of the remaining 25 percent will also "educationally upgrade" positions but without increasing the productivity. In the latter case, either the college graduate employee will increase the costs of the employer without increasing productivity (a basic definition of inflation) or the worker will not be rewarded for his/her college degree, thereby receiving no economic return on his/her investment in that degree (a condition which is also inflationary since the investment, including the cost to society, is not offset by any increased economic return). It is entirely possible to argue for liberal arts education on grounds other than economic return. However, regardless of the goals, there are economic consequences of society's and the student's investment in liberal education. Further, because of the national and indeed world-wide concern for the future of the economy, these consequences must be given serious consideration even by those who would not argue for liberal education on the basis of economic return.

The Carnegie Commission (1973, p. 4) has estimated that of the projected 25 percent surplus, about half of the graduates will increase the productivity, and thereby educationally upgrade their jobs. The other half will occupy positions that cannot be increased in productivity; thus, the worker will be "occupationally downgraded" in terms of individual and social return relative to educational attainment. Based on the commission's own projections, if one out of ten college graduates is thus affected, the actual

number would be slightly over 100,000 per year. The Carnegie Commission's projections are among the most moderate. The National Planning Association (1974), in contrast, projects an annual surplus of 700,000 by 1985, compared with the commission's prediction that the situation will improve during the 1980s (Carnegie Commission, 1973, p. 7).

Although the numerical predictions vary, virtually everyone agrees that, although the situation could improve, it could also become much worse if the current indicators of economic recovery do not prove valid or if political or other conditions should change.

If the economy continues to improve gradually as expected, the overall impact of the leveling of demand for college graduates will probably not cause major problems for higher education. However, it is highly probable that liberal arts graduates will continue to be significantly underemployed compared to their more specialized classmates, especially in initial employment.

This pessimistic review of the employment situation for liberal arts graduates stems from the second major dimension of employment, its *structure*. Available jobs will most likely be those for which liberal arts graduates are unqualified or cannot compete with students having more specialized training. There is considerable evidence of this impact already. Liberal arts graduates, especially those in the humanities and social sciences, have shown consistently higher underemployment and unemployment rates than the national average for college graduates, and the number of job offers and the level of salaries for liberal arts graduates have declined compared to those of students in more specialized fields (College Placement Council, 1973; Gordon, 1975).

Liberal arts graduates are generally classified occupationally as "other nontechnical," a category that showed an absolute decline in the number of new jobs between 1973 and 1977 (College Placement Council, 1977); and over half of the eight percent increase in 1977 was hirings in the federal government. The number of employers willing to hire liberal arts graduates without some previous experience or specialized preparation in business has also declined significantly (College Placement Council, 1974). This situation is not unusual in a "replacement" labor market in which those possessing skills required for a particular position are more likely to be hired and in which employers have no incentive to create manpower pools of liberal arts graduates who can then be trained to fill particular spots as

new jobs are created. (This has been a major purpose of management training programs in times of economic growth.)

Changes in employment rate and salary levels are only symptomatic of the more fundamental structural changes occurring in the market for liberal arts graduates, changes which could influence the future of the liberal arts unless adequate response is made in the near future. Liberal arts education has traditionally prepared students for careers in elementary and secondary school teaching, has served as the first step toward a career in college teaching or in research, and has prepared students for the traditional postbaccalaureate professions of law, medicine, and theology, and for professional master's degrees such as business. In addition the liberal arts have prepared graduates for a wide range of careers requiring general abilities and limited specialized skills, which could be acquired in a relatively short period on the job. (For example, liberal arts graduates traditionally enter sales positions in large numbers.)

Forces influencing occupational demand. Many liberal arts graduates will continue to find jobs in these traditional areas. However, the discrepancy between supply and demand is perhaps more marked here than in any other sector of the market because of several major external forces shaping current and probable long-term market trends: (1) the rapid decrease in the rate of population growth, (2) the similar decline in the rate of economic growth, (3) the leveling of public demand for expensive governmental and social services, and (4) the increased specialization required in many occupations, and the ability of organizations to structure themselves so as to require broad general competencies and perspectives of only a few persons.

Many of the jobs traditionally held by liberal arts graduates are population-sensitive. Teaching is the best example and because of the large numbers of persons employed in this field, population shifts inevitably influence the liberal arts job market more than any other sector. According to the Carnegie Commission (1973, p. 70), requirements for new elementary and secondary school teachers equaled 35 percent of all college graduates in 1963. Because of major declines in the birth rate, as well as growth in college enrollments, the number of new teachers required for 1980 is projected at only 12-15 percent of the undergraduate and first-level professional degrees awarded in that year, a decline of over 50 percent in the relative proportion of available new jobs to available graduates. Similar declines in growth rates can be seen in social work and other human service fields.

The decline in economic growth also affects liberal arts graduates more than others. Liberal arts graduates tend to enter staff positions that support the production of goods and services rather than line positions directly associated with production. In an economic downturn, staff positions are among the first to be eliminated and they are among the last to be added as the economy improves. Business and industrial hiring of liberal arts graduates actually experienced an absolute decline during the mid 1970s, with fewer new positions available each year (College Placement Council, 1977). This trend has been reversed, but no significant increase in hiring is anticipated in the next several years.

Both the short-term and the long-term economic pictures have in turn influenced the public's willingness to pay for government and social services and have caused planners to curtail the development of new services because of the possible adverse economic consequences of increased governmental spending. The federal government, one of the largest single sources of employment for liberal arts graduates during the growth era of the 1960s, has been projected to increase employment by only 6 percent from 1972 to 1985. State and local governments will expand at a faster rate, but many of the positions will not necessarily require a college degree. The public influence also affects elementary and secondary school teaching, where, for example, the National Education Association has estimated that 600,000 new teachers, or about five times the current annual supply of new teachers, is needed to bring schools up to reasonable standards of quality (National Education Association, 1977). Finally, this attitude has affected entry into the traditional postbaccalaureate (post-liberal arts) professions of medicine, dentistry, and law. In medicine especially, and in dentistry to a lesser degree, the field is able to absorb many more practitioners than are currently being prepared, but the projection is for modest growth because of the limited number of spaces available in professional schools (Carnegie Commission, 1973, p. 85). The situation is even more complex in law, where supply and demand appear to be reaching the point of equilibrium, but where the number of applicants to law schools continues to increase (Carnegie Commission, 1973, p. 99). However, job opportunities for law graduates may also expand in response to society's increased legal complexity, creating new positions requiring only a modest amount of formal legal practice.

The fourth major factor influencing the market for liberal arts graduates, and from a long-term perspective perhaps the most important, is increased job specialization. The technical demands of advanced positions and the use of specialization as a means of raising productivity have increased the

specific requirements of many baccalaureate-level positions. Also, since most job vacancies are created by the need to replace existing workers, the requirements of the positions are likely to be developed in some detail. The impact of specialization is evident in the number of job opportunities and the differences between starting salaries for students with specialized undergraduate training versus liberal arts students with general preparation (Kessler, 1973). Even in broad fields such as sales, specialized requirements are appearing and employers are reluctant to hire persons without some preparation in business (College Placement Council, 1974).

Specialization may have reached the point where broad liberal arts skills are no longer necessary for the vast majority of college graduates (Levin, 1976). Levin states that business and government have found it more efficient to organize their efforts so that general competencies, such as wise judgment and original problem solving, are needed by only a relatively small number of individuals in high-level positions. The remaining employees can then be assigned to more specific technical tasks and to routine functions.

Levin's argument does not consider the need for general perspectives among those occupying specialized technical positions where decisions still may have rather broad consequences, and assumes that organizations can separate those activities calling for liberal arts competencies from the more routine functions—indeed this is a common criticism of modern organizations. Liberal arts competencies may actually be needed even more as organizational complexity increases. Nevertheless, Levin's view must be considered since many organizations believe they can structure along the lines he suggests and will recruit college graduates with these criteria in mind. And in response to this attitude and to increased specialization, undergraduates are feeling the need to move away from the liberal arts toward more technical and specialized majors.

Potential sources of growth. What then are the occupational areas to which liberal arts graduates can aspire? The traditional sources of employment—elementary and secondary school teaching, government, and generalist positions such as sales in business—will of course continue to provide the majority of positions, even though the actual numbers have stabilized and in some areas declined. The two baccalaureate and advanced areas of major growth cited by the Carnegie Commission (1973, p. 50) are the health professions and business management. Medicine and dentistry have long been professions pursued by liberal arts graduates, and it appears that access to these professions will be controlled more by access to professional schools

than by supply and demand within the profession. Pressure to reduce the cost of medical and dental education is also causing universities to accept students prior to completion of the B.S., which in turn can cause problems of articulation with liberal education. Nursing, for example, has become a major at a number of traditional liberal arts colleges. The supply and demand situation for nursing is difficult to project because of the large number of qualified nurses currently not seeking employment, but the short-run opportunities for graduates are significant.

Business management and related occupations represent the other major growth area for liberal arts graduates. Managerial positions are underrepresented among college graduates compared to professional-technical positions, and educational upgrading with increased productivity appears quite possible. Management, however, especially in entry- and middle-level positions, is becoming increasingly specialized and based upon technical knowledge and skill. Unless liberal arts students receive more adequate preparation than is provided at present, their chances of competing successfully for managerial positions seem limited. The alternative would be for increased numbers of liberal arts students to pursue advanced business degrees, but this appears unlikely because of the cost both to the individual and to society, and because if large numbers of individuals pursue such degrees, the economic benefits will decrease.

One other possibility for increased employment lies in a wide range of occupations and professions often defined as human services occupations, personal service occupations, and perhaps most broadly, quality of life occupations. These fields include traditional human services such as social work and counseling, along with emerging specialties such as child care and community mental health. The personal service occupations range from fast foods to personal financial planning and management, while quality of life fields encompass occupations such as environmental protection and the conservation of natural resources and urban and rural development.

Many of these fields currently lack adequate technologies, and the demand is such that positions are currently being filled by less than adequately trained persons. Many of these fields may become highly specialized in the future, but generally they seem to require some technical specialization coupled with the need for a broad perspective and an awareness of value implications, plus in many cases the demand for competence in human relations. These would seem to be ideal fields for liberal arts graduates, and to some degree may replace the loss of demand in the traditional liberal arts human service areas of elementary and secondary school teaching.

Summary. The market for college graduates has reached a point of equilibrium with a projected surplus of perhaps 10 percent on the supply side in the next several years. Further, because the structure of the market, especially for initial employment, is changing in favor of specialized-technical skills and away from broad competencies produced by the liberal arts, the burden of underemployment is likely to fall most heavily on those with liberal arts degrees. Without some specialized preparation, some 20-25 percent of all liberal arts graduates (compared with 10 percent of all college graduates) could find themselves in "educationally downgraded" positions, unable to use the competencies they possess. This situation could improve if economic conditions change markedly, but it could also become much worse if barriers to improvement should become too formidable, or if political or other conditions should change. Although most liberal arts graduates will continue to find employment in traditional fields such as teaching, business and government staff positions, and the variety of fields where general competence remains somewhat more important than specialized skill, these occupations are most affected by external forces such as the decline in population and economic growth and by the increased emphasis on specialization. Unless more adequate specialized preparation can be made available, particularly in areas of potential growth such as business management, the health professions, and the human services and quality of life occupations, perhaps one-fourth or more of all liberal arts graduates will have to forgo careers appropriate to their level of educational attainment.

Compatibility of the Liberal Arts and Career Preparation: The Philosophical Issues

Basic issues and major alternatives. Faculty debates over whether to approve career-oriented courses and programs often involve larger but seldom articulated philosophical arguments. Three basic issues can generally be found in such debates:

1. ***Intrinsic versus extrinsic goals.*** In addition to possessing intrinsic merit, the liberal arts can be used to solve problems in practical situations and to develop important personal qualities in the individual. Many traditionalists contend that such extrinsic purposes distort the basic aims and the internal coherence of the liberal arts. Others argue that the liberal arts have been developed in part to serve extrinsic goals. Embedded in the question of intrinsic versus extrinsic goals are two other broad philosophical issues which bear heavily upon career preparation: (a) whether the ideal human existence is the life of contemplation or the life of action, and (b) whether society should be based upon a set of predetermined ideals revealed through reflection and transmitted through the liberal arts, or should be continually

and actively shaped by its members. Those who favor the traditional intrinsic goals of the liberal arts generally also argue that the contemplative life of study represents the highest form of human fulfillment. The truths revealed to those capable of contemplation in turn form the basis for the ideal society which can then be taught to others through the liberal arts. Those who reject this point of view contend that contemplation is only one form of human activity and one source of social ideals. Preparation for a life of involvement in the affairs of society and for actively shaping the nature of that society thus constitute important goals of liberal arts education.

2. *Acceptance of noncognitive aims of education.* The essence of traditional liberal arts education in the United States is epitomized by Emerson's "American Scholar," that is, "man thinking." Since it is the cognitive manipulation of symbol systems that appears to set the human species apart from all others, many argue that the sole purpose of the liberal arts experience should be to develop the qualities of mind. The physical and emotional dimensions of human nature should be subordinate to and controlled by the rational. Others argue that personality and physical competence are important dimensions of "person" and constitute legitimate liberal arts goals. Since success in many baccalaureate-level occupations involves dimensions of personality and in some cases physical skill, acceptance of noncognitive outcomes appears necessary to career preparation.

3. *The relationship of self to society.* The liberal arts accept the premise that human beings are ends, not means. One interpretation of this premise is that liberal arts education must reject any goals which train the individual to meet specific social needs lest the individual and liberal education become mere tools of society. Those who disagree contend that many personal forms of human fulfillment can best be achieved through collective activities and that preparation for service to society does not itself imply loss of personhood or manipulation by others.

Three broad positions summarize the major views within liberal education on these issues: (1) *contemplation of ideals*—liberal arts education as the understanding of the good society through the pursuit of universal ideals; (2) *personal qualities*—continued emphasis upon traditional liberal arts education because the liberal arts experience is considered to produce important general abilities and other personal qualities related to success in vocations and in other important life tasks; (3) *task effectiveness*—acceptance of the traditional aims of liberal arts education but with a willingness to modify and supplement traditional forms of education to meet the needs of students in a complex society.

Contemplation of ideals. The contemplative view of liberal arts education is most associated with Plato. The position incorporates three related perspectives. First, the good society is embodied in universal ideals. Second, through a life of contemplation, the most capable members of society can discern these ideals and transmit them to others. Third, although the contemplation of truth, beauty, and other matters of eternal worth is attainable only by a few, it constitutes the highest form of human existence and the ultimate goal of a liberal arts education.

This position is represented by Plato's allegory of the cave in which the philosopher ascends from the cave of darkness to the light and the life of contemplation, thereby fulfilling the highest potential of human existence. The state, in Plato's *Republic*, is organized around the eternal order discerned by the philosophers and implemented by philosopher-kings who, having emerged from the cave to gain the benefits of contemplation, descend again to the realm of human existence. The necessity for labor is recognized, but the task is delegated to persons incapable of contemplation who must remain forever in darkness.

Plato's allegory captures both the richness and the weakness of the purist liberal arts position regarding the practical. The unique human capacity to perceive truth and beauty is recognized. Order is preferred to action, however, and liberal arts education as a guide to life is designed to ensure adherence to a preestablished order, not to improve the conditions of human existence through direct intervention. The relationship of the liberal to the practical consists primarily of adherence to idealized conceptions, whether in philosophy and politics or in art and practical crafts. Decision making is vested in those few people capable of contemplating that order.

The "contemplation of ideal forms" position continues to play a large, although often unrecognized, role in the views of academicians regarding the liberal arts and careers:

1. The liberal arts experience is conceived as primarily contemplative and passive. Action is viewed with suspicion and those whose competency lies in the direction of action rather than contemplation are regarded as less than fully educated.

2. Employment of the liberal arts for extrinsic purposes, even to achieve important qualities of person, is rejected as demeaning and as potentially destructive to the liberal arts.

3. The traditional liberal arts serve as a guide to the practical by providing important models to which all should adhere. Practical concerns, however, are not considered part of liberal education.

4. Relatively few may be capable of pursuing a life of contemplation, but all can benefit from the fruits of contemplation presented as order and coherence. Exposure to the liberal arts thus becomes a worthy goal of mass education, even though only a small percentage of students can master the actual practice of contemplation.

In its basic form the position of the liberal arts as contemplation admits no other goals, and its adherents would rather defend its traditional aims than adapt to changing conditions. Since this position has major influence within the liberal arts, although often as an unstated premise, the potential result may be the elimination of all emphasis on the liberal arts experience in most undergraduate education rather than the retention of these aims within a larger set of goals. By failing to pursue appropriate links between the liberal arts and action, the contemplative approach also denies the humanizing influence of the liberal arts to those involved in practical affairs.

Personal qualities. An intermediate and probably the most widely held position within the liberal arts argues that while career preparation constitutes a legitimate educational goal, the traditional liberal arts experience constitutes the best preparation for a significant number of students. This perspective reflects the nineteenth- and twentieth-century defenses of liberal education by persons and groups such as Cardinal Newman and the Yale faculty, but its origins can be found in an earlier dispute over whether liberal arts education should pursue any goal other than promoting and sustaining the intrinsic worth of the liberal arts. The Romans more than the Greeks perceived the possibility of developing desirable personal qualities (*humanitas*) through the liberal arts. The Roman view envisioned a society actively pursuing collective goals where wise decisions regarding both ends and means would be made by individuals whose personal qualities, acquired to some degree through education, would render them less susceptible to the seductions of power and who would effectively pursue goals of benefit to society. This view is embodied in Milton's ideal of education as that "which fits a man to perform justly, skillfully, and magnanimously all the offices both public and private of peace and war" (Morris, 1911).

Proponents of the personal qualities approach argue that important abilities such as problem solving and wise judgment are not only the mark of a reasonably complete human being, but also important elements of success

in many careers. Such abilities can be developed most effectively within a traditional liberal arts education which devotes relatively little if any attention to direct preparation for an occupation. Because the abilities developed are generalized rather than task-specific, proponents of the liberal arts argue that they constitute the best preparation for changing occupational demands.

The flaw in this argument is the identification of such generalized abilities as not only necessary but sufficient conditions of career preparation. An analysis of the relationship of the theoretical to the practical (discussed in a later section) suggests that additional specific knowledge and skills are often required to bring generalized expertise to bear upon practical problems. The traditional approach assumes a linkage between the liberal arts and practical affairs but accepts no responsibility for developing that linkage in the student's perceptions.

A second major emphasis of the personal qualities approach is the conception of the liberal arts as the "liberating arts." Liberally educated individuals should be relatively free from ignorance, bias, and limitations of perspective. Since their abilities transcend cultural norms and limits, liberally educated individuals cannot become mere tools of society. Technical education, in contrast, is viewed with suspicion because the aims of such education are defined by society and the individual in turn may be viewed as simply a resource to be exploited by the state.

The liberating arts conception of the proper relationship between the educated individual and society constitutes one of the most powerful arguments against strictly technical forms of education. In addition to reminding us that human beings constitute ends, not means, the personal qualities approach argues that the best preparation for effective citizenship and for human service is one that frees the individual to exercise his/her best judgment.

Liberal education as preparation for important life tasks. More task-oriented or pragmatic approaches to liberal education have gained increased attention because of two related concerns regarding traditional forms of liberal education. First, traditional approaches have never devised an entirely satisfactory answer to the question, "What is the knowledge most worth having?" Since no individual can ever know everything of importance, traditional conceptions of liberal arts education have devoted much effort to determining principles for the selection of educational content. The current "traditional" answer, with some important variations, emphasizes the study

of representative disciplines selected from the natural and social sciences and the humanities. Those who contend that educational goals must eventually reflect the ability to cope with important life tasks argue that some educational experiences are more central to these tasks than others and should receive priority. The latter approach assumes that the tasks have some degree of permanency and/or that the competencies developed to cope with these tasks may themselves be generalized to include new situations that might arise in the future. The first assumption, that a stable society requires relatively permanent life tasks, characterizes the older general education movement; it led to an emphasis on interdisciplinary issues and problem-oriented courses. The current emphasis on development of generalized competencies presumes that although the tasks toward which competencies are directed may change, the competencies themselves can be applied to a wide range of new situations. This latter position relates the task-oriented approach much closer to the emphases, traditional within the liberal arts, on problem solving and other generalized abilities. The significant difference is that the newer approach accepts responsibility for developing the student's ability to link generalized skills to defined tasks.

The orientation to important tasks is also reflected in the second major distinction between the task effectiveness view and more traditional views —the acceptance of specialization. Those who favor the contemplative life as the liberal arts ideal reject specialization as they reject all activist-oriented forms of learning. Those who favor the personal qualities approach accept the necessity of some specialization but have viewed it as something to be counteracted through an emphasis upon the "liberating arts," lest technical narrowness replace uninformed ignorance. Until recently, "excessive specialization" has probably been perceived as more of a problem than "vocationalism." And although specialization in the form of an academic major has perhaps dominated undergraduate education in the last twenty-five years, relatively few guidelines have been developed to define its role within liberal education.

A view of liberal education in which specialization plays a central role has been perhaps most effectively articulated by Alfred North Whitehead. According to Whitehead, "man is by nature specialized" (Whitehead, 1928, p. 15). One does not think in general, one thinks as an engineer or a lawyer, and thus specialization must be given a central role in undergraduate education, with "general culture" placing that specialization in a broader context so as to avoid narrowness of perspective. Whitehead and other proponents of specialization thus recognize the potential narrowness of specialization which the "liberating arts" seek to overcome, but argue that the tasks

of a complex society as well as the fundamental nature of human thought place specialization at the heart of education.

The task effectiveness position also differs from more traditional perspectives in its clear acceptance of the human resource needs of society as a legitimate source of educational goals. Service to society is pursued as an aim, both in the sense of specialized career service and in the development of more general capabilities such as "education for citizenship." Traditionalists criticize this view on the grounds that it makes human beings the means to achieve social ends. The answer to this charge lies in a view of human development in which fulfillment of human potential may occur no less in a role of service than in a life of contemplation, and in a view of society in which self-fulfillment for all can be facilitated by some forms of collective action. This position, however, is viable *only* as education for social resources remains firmly grounded in the "liberating arts."

Toward a synthesis. Every institution and indeed every faculty member and student must of course resolve these issues on an individual basis. A tentative general conclusion is that the personal qualities and the task-oriented positions can be largely reconciled within the framework of a relatively traditional liberal arts education, provided the basic points of each position are maintained. In other words, liberal arts education can become more task oriented, can incorporate new and expanded areas of specialization, and can emphasize service to fellow human beings through the pursuit of worthy careers *provided* such education (1) retains its traditional foundation in the liberal arts as a source of personal meaning and as subjects worthy of pursuit in their own right, (2) remains committed to the development of important personal qualities (*humanitas*), (3) requires appropriate breadth of perspective and qualities of openness to liberate the individual from bias and ignorance, and (4) emphasizes that a democratic society is a means to personal fulfillment for all its members, but with special responsibilities falling to those with talent.

Compatibility of the Liberal Arts and Career Preparation: The Research Evidence

Although the philosophical issues involved in relating career preparation to the liberal arts are substantial, the major concerns at many institutions involve the practical question: What effect will an emphasis upon career preparation have on liberal arts students and on the character of the liberal arts institution? The few studies that have examined institutions making a significant commitment to career preparation have been largely case studies of situations where specific conditions mandated or facilitated change. The

more typical approach to projecting the consequences of increased career preparation has been to examine institutions with varying emphases in this area and to speculate what might happen if other institutions were to change in one direction or another.

The liberal arts have long been suspicious of the pragmatic orientation of American culture. Proponents of the liberal arts claim that American youth are much too vocationally oriented and that the task of liberal arts education is to broaden students' perspectives, not to reinforce more narrow aspirations. Decades of research on the outcomes of college education and on the sources of those outcomes have produced several broad conclusions relevant to the concerns of opponents of career preparation, who argue that an emphasis on vocational aims will attract students and faculty less committed to the liberal arts and thus change the character of the institution and its impact on students.

1. The outcomes of college education are determined largely by the expectations and characteristics of the students initially enrolled and by their interaction with other students during the college experience. There is thus a well-developed relationship between the process of selection that leads students to attend a particular institution and the consequences of attending that institution. Furthermore, the impact of most institutions, especially on the broader outcomes of college education, is achieved largely through the "student culture" which is in turn shaped by the characteristics of the students enrolling (Feldman and Newcomb, 1973, p. 334). (All subsequent page references are to this comprehensive analysis of the literature.)

2. Students are attracted to an institution by the image of that institution, which is in turn shaped for the most part by the characteristics of students already in attendance (p. 145).

3. The outcomes of college education "accentuate the initial differences" between the students attending a particular institution and the general population (pp. 333-36) and produce an increasing "progressive conformity" to the dominant (student) cultural norms of the institution (Astin and Panos, 1969).

4. The influence of the faculty with respect to broad intellectual and attitudinal outcomes is often mediated by the student culture, whose attitude must in turn be favorable if liberal arts goals are to be achieved (p. 330).

5. The influence of the faculty is proportionate to the consensus among faculty regarding the aims of the institution (p. 265).

The threat to liberal arts education posed by the need for career preparation is thus, to a considerable degree, the threat that institutions will attract more vocationally oriented students who will change the character of the institution and which will in turn attract an even more vocationally oriented clientele. Likewise, faculty recognize that the broader, more important aims of the liberal arts are achieved to a considerable degree through the reinforcing efforts of a favorable student culture and through consensus and unified action on the part of the faculty. Attracting students and faculty less than fully committed to liberal arts aims significantly diminishes the probability of attaining liberal arts outcomes.

This then is the classic dilemma of change within traditional liberal arts institutions: whether to attract students and faculty not entirely committed to current goals and thus risk changing the basic character of the institution, or to resist change and perhaps fail to adapt successfully to changed conditions. The dilemma is real, but some solutions need not undermine the liberal arts tradition. Other empirical evidence suggests that institutions and students can, within reasonable limits, emphasize career preparation and the liberal arts simultaneously without major difficulty:

1. Students attend college generally for pluralistic reasons. Although students may be attracted to an institution for almost exclusively liberal arts or vocational purposes, most express considerable interest in both career preparation and other educational aims (p. 16).

2. Interest in and progress toward the broader goals of education increases during the college years regardless of field of study (p. 19). An initial interest in the liberal arts should thus increase in an institution that promotes liberal education as one of several institutional goals. Students, however, should not be too vocationally oriented or they may be less than receptive to the broader effects of the college experience (pp. 298-99).

3. Student interest in careers shifts during the college years from an extrinsic orientation toward the status and rewards of an occupation to the more intrinsic interest in using individual competencies in meaningful activities (p. 19).

4. The impact of faculty is greatest where there is opportunity for meaningful intellectual contact between students and faculty both within and

outside the classroom (p. 267). Efforts to prepare students for careers may provide opportunities for such relationships within a liberal arts context.

The evidence suggests that if an institution can attract a majority of students with a significant interest in the liberal arts, even though this interest may be mixed with career aspirations, the vocational aims will broaden and become more oriented toward the intrinsic satisfactions gained from the use of abilities, and student responsiveness toward liberal arts goals will increase as well. An institution that responds to student career interests within the context of a firm commitment to the liberal arts should thus be able to meet the challenge of career preparation while maintaining the basic integrity of the liberal arts experience.

Issues of Implementation

Although the fundamental question of whether the liberal arts and career preparation should be combined within a single academic program continues to generate debate and to influence institutional policy, most liberal arts institutions appear to have accepted at least some responsibility for the career preparation of their undergraduates. Major issues of implementation must still be resolved, however, if career preparation is to be effective. This section addresses three such issues:

1. the question of the relation of theory to practice, which states in general form the more specific question of the relationship of the liberal arts to performance in occupational tasks;

2. the problem of what career-related competencies can be developed most effectively within a liberal arts context;

3. the issue of how the exploration of career interests and the process of career choice (vocational development) can be facilitated within liberal arts education.

The Relation of Theory to Practice

Traditional views. Virtually every debate about the proper approach to career preparation within the liberal arts involves different conceptions of the relationship between theory and practice. Liberal arts proponents contend that theoretical knowledge constitutes the core of career preparation and assume that application to practical affairs is relatively easy, indeed not often worthy of academic credit. Those advocating more narrow forms of career education consider theory as having relatively limited application

to practical affairs and conceive of career preparation as consisting of learning directly the practical knowledge required for success. The position to be developed here, which in turn provides the basis for several more specific analyses and recommendations in later sections, is much closer to the liberal arts position, but reveals more complexity in the theory-practice relationship than the liberal arts have been prepared to admit, and the need for modification of traditional liberal arts practices.

Liberal arts perspectives on the relation of theory to practice have been dominated by two points of view, the Platonic doctrine, discussed earlier, of universal ideas which serve as the guide to practice; and the view—which gained most influence through the efforts of Abraham Flexner—that professional practice represents the direct application of generalizable skills acquired through the study of theoretical bodies of knowledge. Because of their influence on current liberal education and because of their major weaknesses, both views must be explored before a more effective explanation of the theory-practice relationship may be stated.

Plato's doctrine of ideas clearly subordinated the world of the practical to the world of universals. Plato's fear of the possible negative consequences of action led him to emphasize the stability of established order rather than the possibilities of change, and to subjugate "doers" to "knowers." Theory guides practice, according to this view, by setting ideals toward which the practical is expected to aspire. Theory remains aloof from practical concerns and has little to offer practitioners in developing processes to achieve established goals.

Theoretical wisdom, the direct study of universal ideals, is considered the true realm of liberal education and is attainable only by the few capable of such study. Practical wisdom, the knowledge of ideals and of the means to their attainment, becomes the educational goal for the vast majority who will spend their lives helping to pursue, but admittedly never attaining, the stated universal ideals. (Humanistic study is advocated for the masses in order to transmit ideals.)

This view still dominates much of humanistic thought and explains the failure of many humanists to relate ideals directly to pressing social problems. It is based on the ideal of the life of contemplation discussed earlier, which sharply separates career preparation from the liberal arts. It is a view which vastly oversimplifies the complexities of modern technological intervention ("action") and is more appropriate to simplified societies. Indeed, the restructuring of society along more simplified lines is often a

humanistic goal. The view is also utopian and somewhat at odds with the concept of a democratic society in which all participants contribute to shaping the aims of that society, and in which compromises and trade-offs between competing human ideals are necessary.

A second view, currently more widely accepted among scientists and humanists alike, contends that theory can be actively and directly applied to practical situations. This position is associated with Abraham Flexner, whose monumental efforts on behalf of medical education rested squarely on the proposition that any profession must be based upon a theoretical body of knowledge rooted in one or more basic scientific disciplines.

Flexner's influence has been of special significance because it occurred at the time when more practical subjects such as engineering and business were being introduced into the university in large numbers; and the Flexnerian emphasis upon first acquiring an understanding of basic scientific theory, followed by application to the practical through clinical studies, was adopted in virtually every field. Flexner also argued that the proper education for a practitioner was a scientific education, since the practice of medicine and other professions was largely based upon the "spirit and method of science." Flexner did not equate scientific method and professional practice, however, a point often overlooked by his intellectual heirs (Peterson, 1976).

The Flexnerian model that has emerged, despite some divergence from the actual views of Flexner, conceives of practice as the direct application of theoretical knowledge, supported by practical skills. Science, in this model, consists of universal generalizations modified where necessary to fit the conditions of various situations. Professional knowledge, therefore, consists largely of contingency generalizations which modify the universal principles of science in light of practical considerations.

The Flexnerian theory-practice model contains several major shortcomings. First, the Flexnerian model is essentially reductionist. It assumes that practical knowledge can be reduced to (i.e., derived from) the underlying scientific theory. This may be true of certain phases of engineering and of medicine which represent relatively closed systems in which all the conditions can be specified. More often, science provides a "weak" form of reduction in which professional knowledge can be summarized in terms of basic scientific principles, but cannot be derived from those principles. This is true especially of professions based upon the social and behavioral sci-

ences where the underlying disciplines themselves often represent at best summary frameworks rather than deductively organized theoretical systems.

Second, the traditional theory-practice model assumes that science can achieve a relatively complete explanation of practical situations; that is, it can account for most of the relevant variation in those situations. Most practical situations are instead characterized by "uncertainty" because the important conditions cannot be specified. ("Uncertainty" plays a major role in the alternative model to be presented.)

Third, because of the other weaknesses, there is potentially great danger in translating scientific explanation directly into practice, as the attempts to translate Skinnerian psychology into a technology of behavior modification demonstrate. Science ignores too many elements such as value considerations to be applied directly to practice.

A fourth important weakness is that the traditional model assumes that the essence of practical tasks is basic scientific explanation, a distortion of the view actually espoused by Flexner. This perspective is simply incorrect, as an analysis of the world of practical affairs will demonstrate.

Practice as intervention within constraints. The task of the practitioner is not explanation, although explanation plays a key role; the task instead is active intervention to bring about (or maintain) a state of affairs that would not otherwise have occurred. Intervention, or planned change, is thus the essence of all practical activities. The key intellectual components of the practical are first, and most obviously, the *design* and *implementation* of the intervention; and second, the *decision* to select a particular intervention based upon the predicted consequences. Will the intervention bring about the desired change, and at what cost in negative consequences or side effects? Decision making, especially in the more advanced professions, is often more important than skill in intervention, since intervention, once designed and its consequences ascertained, may be carried out by subprofessionals.

Practitioners therefore are not interested in explanation per se or in how an intervention works, but in how well it works and at what cost in terms of expended resources and negative consequences. The need for explanation occurs, and here the powerful role of scientific theory reasserts itself in somewhat modified form, because until an intervention can be explained satisfactorily, its potential consequences, particularly long-term consequences, cannot be predicted adequately. For example, relatively little is

known about how "the pill" acts to prevent conception. That it does work within limits, has been well established; but until the question of how it works is answered, the long-term consequences of oral contraceptives cannot be determined.

Both the practitioner and the scientist thus have a major interest in predicting the consequences of intervention—the practitioner because knowledge of consequences is necessary to make wise decisions, the scientist because the phenomena he/she seeks to explain are affected by interventions which in turn must be explained. A long-term goal, then, is to merge practical and scientific knowledge into a more comprehensive theory of consequences (Gouldner, 1960). This long-term interest in a common knowledge base should not obscure the very real and significant differences between theory and practice, however. To explore these differences adequately the concept of intervention and consequences must be expanded using the additional conception of "constraints."

In any practical situation a variety of factors influence the outcome of an intervention. An engineering intervention, for example, is influenced by the laws of gravity; a psychological or educational intervention by the laws of motivation. These influencing factors are defined as the "constraints" of a situation. They include *empirical laws* such as gravity and motivation, *aesthetic preferences*, *costs* such as time and material resources, and *ethical considerations*, such as the rights of the individual versus the needs of society.

Theoretically, if all the constraints, and hence all the consequences, in a situation are known, a single best or "optimum" intervention will emerge from the design- and decision-making process. In most situations, many important constraints and their potential consequences are either unknown, a condition familiar to corporations trying to forecast economic conditions before introducing a new product, or are too numerous and complex to deal with simultaneously. In some cases constraints may be "known" but current intervention technologies may not be adequate to cope with them.

The fact that important constraints are unknown or cannot be predicted introduces "uncertainty" into decision making. The fact that important constraints must be ignored introduces "suboptimization"; that is, solving a problem or making a decision based on less than full consideration of all the relevant factors. In reality, much of what differentiates the practitioner from the researcher reflects the practitioner's attempt to cope with uncertainty and suboptimization while limiting the negative effects. What ap-

pear to scholars to be less than fully rational processes are often techniques for coping with the major constraints imposed upon practical affairs. Professional practitioners generally settle for short-range, less than maximum solutions because of the uncertainty and risk associated with more fundamental changes and the cost in time and resources required for comprehensive rational decisions. Decision makers thus "satisfice," not maximize (Cyret and March, 1964). Complex situations are resolved through a series of incremental steps over time (Lindblom, 1959) and through simultaneous implementation of multiple approaches to hedge against the failure of a single approach (Cyret, 1975). Compromise and trade-offs because of conflicts over goals and means are assumed and decisions are sometimes achieved through conflicting groups' persistent criticism of one another (Lindblom, 1959). The test of an intervention or decision is not absolute, but relative to the other available alternatives. Where adequate power is available, attempts are often made to control the environment and hence reduce uncertainty (Cyret and March, 1964).

The generalized intervention strategies, such as incremental decision making and successive comparisons of available alternatives for coping with complex practice tasks, have been embodied in a variety of "quasi-rational" techniques, including the processes of design used in engineering, planning, and budgeting systems such as PPBS, clinical diagnostic and problem-solving techniques, operations research, and techniques of policy analysis.

The knowledge base required by these strategies has been in large measure organized around the strategies themselves rather than in terms of the underlying basic disciplines. Scientific explanation remains central, in defining important constraints and therefore in predicting consequences, but the complexity of practice reveals more limitations in science than many proponents of the liberal arts currently accept.

Generalized technologies versus the mechanics of specific situations. Professional knowledge of the type discussed thus far still constitutes generalized knowledge and may be a step removed from the particulars of many practical situations. Toulmin (1976, p. 37) calls this general theory of practice "technology" and distinguishes it from "mechanics," the specific knowledge needed to handle the individual situations which confront practitioners. Because they are conceived within a framework of intervention, technologies are more directly applicable to practice than scientific explanation. However, such technologies must still often be modified to meet the needs of particular situations.

Some technologies, such as certain forms of drug intervention in medicine, are powerful enough to overcome the idiosyncrasies of many particular situations. Most interventions, however, must be reinterpreted within the context of actual practice. Practice knowledge, or mechanics, therefore, is situation specific and is generally nontheoretical. It may represent quite simple conclusions, or it may be exceedingly complex as in a profession like medicine. At best practical knowledge may be formulated into "covering laws" of the type found in history, which contains just enough generalization to cover the phenomena under consideration. Often, however, practice knowledge draws upon the personal intuition or charismatic qualities of the practitioner and cannot always be codified or taught in didactic fashion.

Because of the importance of practical knowledge to effective practice in many occupations, students should be given the opportunity to determine if they possess the appropriate intuitive-charismatic qualities of a profession or occupation prior to spending long periods acquiring scientific and professional knowledge which may prove useless if, as practitioners, they are not able to cope with the idiosyncrasies of specific situations.

Summary. The relationship between theory and practice is more complex than either the Platonic (adherence to ideals and universals) or the Flexnerian (practice as the direct application of science) interpretations suggest. Science seeks to explain systems of phenomena, while the practitioner seeks to change the state of affairs through intervention. Practitioners, moreover, must operate within knowledge, value, and resource constraints which limit the forms of intervention. The role of science in practice is to predict the consequences of intervention so the practitioner may determine whether the constraints have been met. Complete prediction is possible only through complete explanation and thus the interests of science and practice are complementary. In most situations, however, important constraints are either not known (uncertainty) or cannot be coped with simultaneously (suboptimization). Generalized professional techniques, such as those in design and operations research, have been developed to resolve these conditions by subdividing problems into manageable parts and by reducing uncertainty and the accompanying risk of unforseen consequences. Finally, professional knowledge itself constitutes a generalized technology which may not be directly applicable to specific situations without the assistance of specific knowledge (mechanics) which is often nontheoretical and may be derived intuitively rather than rationally.

The Liberal Arts as Competency

The demand for competency-based education. In a meritocratic society,

the person demonstrating the most capacity to perform the tasks associated with a position should be offered that position. The ability to perform a designated range of tasks is defined as competency; and the current emphasis on competencies represents much of the criticism against liberal arts education, because of its claims to produce broad rather than task-specific abilities and its failure to credential the actual competencies achieved by students.

Liberal arts education can claim significant success in developing general personal qualities and can point with pride to the number of graduates who pursue successful careers and lead meaningful lives. However, the claims that a liberal arts education develops important analytical and reasoning abilities is less validated (Feldman and Newcomb, 1973), and the criticism can even be offered that liberal arts students are trained in rather narrow forms of reasoning. Evidence for this criticism can be found in the several studies which have examined tests and other evaluation devices used in liberal arts classes. Academic performance as embodied in these assessments stresses comprehension and manipulation within the relatively structured boundaries of abstract bodies of knowledge. Where other cognitive skills are developed, provision is seldom made for the application of these skills to a reasonable variety of new task situations. The most telling criticism of undergraduate education, from a competency perspective, is the conclusion from a wide range of studies that academic success, as measured by college grades or traditional tests, does not relate to any other kind of scientific, creative, artistic, or professional achievement (Wallach, 1976). The competencies rewarded in academic performance are for the most part not those required for effective participation in other important life tasks.

The evidence regarding college grades indicates also that even if students are able to develop career-related competencies, the traditional course structure and grading practices of liberal arts institutions often prevent those competencies from being credentialed on the transcript. The current emphasis by students on internships and other off-campus studies represents an effort to credential what the individual can currently do, as well as to explore and develop new interests and abilities. Only the natural sciences, perhaps, come close to the professional schools in defining not only the body of knowledge covered in specific courses, but the competencies, such as lab techniques, associated with that knowledge. The social sciences and humanities, in contrast, cannot as disciplines define what occurs in most courses other than the coverage of identifiable topics.

Competency development within the liberal arts. The problem for the liberal arts is how to select and credential a set of generalized competencies appropriate to a specified range of career-related situations. From the perspective of curriculum design, the dilemma is how to strike an appropriate balance between *power* and *generalizability*. "Power" is the ability of something to achieve a designated end; for example, the ability of a technique to solve a particular problem, or the ability of a conception to explain a phenomenon. "Generalizability" defines the range of situations to which a technique or knowledge may be applied, given some minimum standards of power. The liberal arts have long claimed that cognitive skills associated with traditional forms of scholarship are sufficiently powerful when applied to other types of problems, and can be generalized to a wider variety of situations than can more narrowly conceived vocational competencies. The current job market does not accept these claims and employers prefer to hire specialists educated for the specific tasks of particular positions. Therefore, in terms of the current job market, the liberal arts should continue to develop generalized competencies but should emphasize those which are also powerful enough to satisfy the requirements of particular occupations. A combination of two approaches appears to be the most promising solution to this problem within a traditional liberal arts framework: (1) the development of more task-oriented yet still generalized competencies; and (2) the development of additional specific skills as needed for entry-level positions.

The professions have solved the problem of competency development more successfully than the liberal arts by restructuring generalized abilities, such as problem-solving skills, into somewhat more defined procedures appropriate to a range of identifiable tasks. Many of these professional techniques, however, are linked conceptually to the most generalized of liberal arts skills and could be taught to students as generalized competencies not necessarily related to the content of a specific profession (Sagen, 1973). The essence of professional problem solving is decision making, the decision to intervene on behalf of a client based on an assessment of the potential consequences of that intervention; for example, the decision by a surgeon about whether or not to operate. Within the broad context of decision making as intervention, professions have developed processes, such as the planning and forecasting techniques employed in business and government, which can and should be taught within the liberal arts tradition in the same way that scholarly and research techniques are introduced. Instruction should give major emphasis not only to competency in applying techniques as general analytical procedures, but to the rationale and assumptions which potentially define their limitations. Only as the rationale and limitations of

techniques are made explicit can a liberal arts education become truly liberating and can the results of such an education be used most wisely.

Competency-based techniques in their most generalized forms can be introduced in basic undergraduate courses and advanced in the student's major and additional electives. For example, the basic elements of design might be introduced in introductory physics; the nature of biological systems might be examined from the perspective of designing optimum environments or solving problems; economics might emphasize the variety of operations research techniques employed in economic decision making; and political science might develop the several analytical tools employed in policy analysis.

Competencies likely to be in demand. At the present time, it appears that employers prefer graduates of specialized programs over liberal arts graduates (College Placement Council, 1974). The tasks within complex organizations often demand specialized training, and even in more generalist positions, specialists such as business administration majors may be preferred because their specialized training provides greater opportunity for the development and credentialing of generalized competencies. However, according to the College Placement Council survey (1974), business would increase its hiring of liberal arts graduates by approximately one-fourth if students would acquire additional preparation in business-related courses or cooperative and other experimental work.

Based upon an analysis of the current job market, the following generalized competency areas appear worthy of further exploration by liberal arts institutions interested in effective career preparation:

1. *Quantitative analysis.* Mathematics constitutes one of the critical filters in the selection of careers, and "math anxiety" and the subsequent failure to obtain adequate preparation in quantitative methods may explain a sizeable portion of the employment problems of liberal arts graduates. Baccalaureate occupations have increased their demands for quantitative skills, and more specialized programs of preparation such as business administration have responded to this need far more effectively than have the liberal arts. Many colleges continue to make heavy demands for foreign language competencies yet produce mathematically illiterate graduates who cannot compete successfully for employment.

2. *Rational techniques.* Quantitative analysis provides one foundation for a variety of rational decision-making and problem-solving techniques de-

veloped by professions such as business and engineering. Planning, design, and operations research are but a few of the areas in which such techniques have been developed. As indicated earlier, these techniques can be related to more general cognitive strategies and can be taught legitimately within liberal arts programs. Many of the techniques are associated with the technology of high-speed computers and could be taught within that context.

3. *Understanding the economic system as a basis for decision making.* The addition of more business-related courses is one of the specified conditions under which employers would hire more liberal arts graduates (College Placement Council, 1974). Business organizations and the economic system have probably been among the most neglected phenomena of study within liberal arts institutions. Few individuals can function effectively in managerial and professional-level positions without some understanding of the economic system within which a business operates and which determines its organizational structure and decision-making processes. To participate in economic and business decision making, one indispensible tool, according to the College Placement Council survey, is a basic understanding of *accounting*. Quantitative analysis, rational techniques, and an understanding of economic processes thus constitute necessary tools for the liberal arts graduate in modern society in the same way that competence in Latin and Greek were necessary to participate as an educated person in medieval societies.

4. *Organizational and political competencies.* Despite the fact that most individuals with advanced education will spend their careers within relatively complex organizations, the development of organizational skills has been limited largely to those preparing directly for managerial occupations. Indeed, a significant amount of the frustration that students and others express about "bureaucracy" and the "political system" appears to stem from a lack of competence in coping with complex social institutions. Students need to develop the ability to organize and facilitate the work of others, to function as members of professional teams, and to achieve political goals. As with cognitive skills, role playing and simulation exercises can be employed to develop political and organizational skills. Opportunities for field experience should be made available and undergraduate instruction in the behavioral sciences should include organizational, managerial, and political principles.

5. *Human relations skills.* Another set of increasingly important competencies is associated with the helping professions such as counseling, social work, and teaching. Competencies such as the ability to solve personal

problems and to develop important human qualities in others often involve a complex combination of intellect and of emotional qualities such as sensitivity and empathy. Human relations skills are also involved in organizational development where helping relationships might often replace bureaucratic rules and political manipulation. A basic component of most human relations skills is self-awareness, which prevents one's own emotions from hindering relationships with others. The cognitive-rational component of helping skills is receiving increased attention. Many helping and clinical techniques such as interviewing, observation, and other methods of personal assessment are also employed in research and could be developed within traditional liberal arts courses. These skills often are to the social and behavioral sciences what laboratory techniques are to the natural sciences, and could legitimately be taught in such a way as to encompass practical as well as research applications.

6. *Communication skills.* The long-standing concern for effective writing demonstrates the legitimacy of competency development within the liberal arts as well as the problems of trying to implement competency-based programs. One of the traditional claims for liberal arts graduates has been the ability to write effectively. Yet the liberal arts have not been spared the broad criticism about the decline in writing effectiveness. Although writing has been one of the few competency areas for which some faculty with specialized expertise have been employed in liberal arts colleges, many institutions have disbanded composition and rhetoric courses (Blackburn, et al., 1974) usually with the claim that all faculty should be involved in promoting effective writing. When everyone is equally responsible for a particular competency, usually no one is, in fact, responsible. Some faculty must be given special responsibilities, but all faculty must reinforce and extend the efforts of those who teach basic skills. Such propositions concerning an effective writing program could well form the model for instruction in other competencies such as quantitative analysis and problem solving. Special courses in major competency areas may be needed but they must be constantly reinforced and extended by other elements in the curriculum.

The credentialing of competency. If liberal arts graduates are to compete successfully for jobs, they must present credentials which reflect an accurate assessment of their achievements, which are easily compared with those of other applicants, and most importantly, which attest to competencies which themselves have been proved in specific occupational tasks. Traditional college grades and tests of academic performance have shown little or no relationship to occupational success (Hoyt, 1966; Wallach, 1976). Letters of recommendation may attest to student accomplishments beyond

those stated on a transcript, but such letters have many limitations and carry relatively little weight in a mass job market currently suspicious of liberal arts claims.

Four broad approaches to credentialing of competence appear feasible within the framework of traditional liberal arts programs. First, liberal arts institutions should place major emphasis upon internships and other forms of field experience as opportunities to validate career-related competencies, and should adopt many of the procedures now being developed to grant academic credit for experiential learning (Keeton, 1976). Students are turning to field experience opportunities to credential their competencies prior to entering the job market. Quite often, however, such experiences result at best in a letter of recommendation which lacks the qualities and the impact of more standardized measures. Institutions should employ more objective forms of supervisor assessment, portfolios of accomplishments, and related measures to credential student performance in field settings.

Second, the liberal arts should experiment with the competency assessment techniques now used in business and government. Performance appraisals, simulation techniques, and some forms of standardized testing could be used to verify student competencies in a more valid and reliable fashion than is now the case. Many of the competencies might be attained in traditional liberal arts courses and credentialed separately. Institutions might be able to develop a supplementary transcript to verify the achievement of well-defined competencies.

Third, certain courses might become essentially competency based. Courses in policy analysis, operations research, computer techniques, and individual and organizational assessment could all be introduced within a traditional liberal arts framework.

Fourth, opportunities should be afforded students to credential quite specific occupational knowledge and skills even though the achievements may not be granted academic credit.

The liberal arts must resist the current tendencies toward overspecialization and overcredentialing. At the same time institutions must respond to the legitimate societal expectation that demonstrated merit become the sole basis for employee selection.

Vocational Development in Liberal Arts Students

Liberal arts education is undertaken by most students in the immediate

post-high school years at a time when personal interest in choice of career is high and when there is considerable social pressure to define oneself in terms of an occupation. The traditional liberal arts response has been to combat "premature specialization" and "vocationalism," synonyms for early commitment to a career and for conceiving of undergraduate education as primarily the means to attaining career goals. Requirements are thus established and curricula often designed to preclude the early pursuit of career goals. While the concern about specialization and vocationalism is valid, the excessive reactions within the liberal arts deny students the opportunity for career exploration at a point when postponement may lead to inappropriate career choices and at a point where denial of career interests also denies opportunities for legitimate personal development. Furthermore, the overreaction to student career interests denies a potential relationship between the liberal arts and career preparation in which both might be advanced simultaneously.

Career exploration in the liberal arts should be part of a broader pattern of identification and development of important personal qualities, and of the search for a satisfying life-style embodying values associated with the liberal arts. Support for this view can be found within the several traditions of liberal arts education and within the theoretical and research literature on career development.

One major point of reconciliation of the liberal arts and careers is to define "career" in the broadest possible way to avoid focusing on narrow vocational preparation. "Career" should thus be defined as the "series of differentiated roles a person plays in his/her lifetime." For persons with advanced education, occupational roles will be among the most important and potentially among the most satisfying. But nonoccupational roles such as community leader, human resource for a church, and parenting should also be considered, and may often demand competencies similar to those required for occupational success.

Career exploration in this sense becomes the exploration of alternative life futures in which the values and perspectives of the liberal arts can and should play a major role. Including the nonoccupational dimensions of careers, also emphasizes the intrinsic satisfaction of using abilities and pursuing interests rather than the extrinsic status and rewards derived from occupational positions. Career exploration is a problem-solving and decision-making process which can be seen as the search for satisfying and rewarding environments, the series of which occupied over a lifetime constitutes one or more careers. The individual seeks to match his/her interests, de-

sires for status and rewards, satisfactions from using abilities—that is, whatever is desired from a career—with potential alternative environments for satisfying those desires. Career exploration thus involves exploration of self and exploration of alternative environments. Information must be gathered regarding what the individual desires from a career and what he/she can contribute to various positions. Similar information must be obtained regarding what alternative occupations can offer and do demand.

Career exploration, especially in secondary education, has traditionally emphasized dissemination of occupational information and career counseling, the latter designed essentially to clarify the individual's interests and aspirations. The problem, it appears, may be of a somewhat different nature. Only a minority, although probably a significant minority of perhaps 30 percent of the population, may need career counseling (Holland, 1974). Similarly, the need to gather extensive information regarding many of the 30,000-40,000 different kinds of jobs may be overstated. Most jobs can be classified according to a much smaller typology of tasks and can be pursued from the perspective of what types of tasks are of most interest.

The problem of career exploration for college students especially, may instead involve (1) determining what one is good at (competency) and what one likes to do (interest) that has relevance in the occupational world, and (2) discovering what range of occupations and other activities allows one to engage in whatever combination of interests and competencies is most satisfying.

These tasks, particularly the task of determining abilities and interests, may actually be hindered to some degree by the liberal arts experience and thus careful attention should be given to career exploration among liberal arts students. (This may account for some portion of the initial difficulties liberal arts students experience in the job market.) Self-awareness may involve not so much the clarification of perceptions through counseling as the gathering of new information, through direct experience, about the nature and limits of abilities and interests. In occupational and professional curricula, students from the outset usually develop competencies related to their intended careers and validate these in field experience as well as in the classroom. Liberal arts students generally do not take courses with well-defined competency requirements and are offered relatively few opportunities to test their competence in more experintial settings. In one ACM college an extraordinary percentage of seniors (about half at one time) are enrolled in secondary teacher certification programs, even though less than a third of those enrolled actually enter the field according to follow-up data. The ex-

planation offered by the dean is that student teaching is one of the few places in the institution that students can actually demonstrate (and find out) what they can do.

Liberal arts education all too often extends the phenomenon identified by Wynne (1976) in *Growing Up Suburban*, where the affluent environment of many modern youth in effect denies work and other experiences that would lead to self-understanding about abilities and interests. Although college may offer unusual opportunities for the development and credentialing of new abilities and interests, it may also preclude more prosaic experiences in which the individual assumes responsibility for work and related tasks. A range of field experiences plus attention to the development of important competencies within traditional courses would thus help liberal arts students to better understand their abilities and interests. Career exploration is, to a large extent, a search for limits. Until one has tried and eventually achieved less than full success, the limits of ability and competence cannot be determined.

The second dimension of information gathering about careers and alternative occupations may similarly involve not so much finding out about the requirements of particular occupations as determining what range of occupations might allow the use of major abilities and provide intrinsic satisfaction. Career exploration in college should not necessarily mean a progressive narrowing of alternatives. The college experience should open up a wide range of possibilities consistent with the expansion of interests and abilities through the liberal arts.

This approach appears particularly important to liberal arts education for another reason. Unlike those in professional-occupational curricula, liberal arts students are not preparing for a well-defined range of employment possibilities. A significant portion of the anxiety among liberal arts students, and their faculty advisers, appears to stem from a lack of knowledge about the variety of occupations made possible by a liberal arts degree. In a tight labor market especially, restricting exploration and planning to the types of occupations with which students and faculty may initially be familiar, or for which recruiters come to campus, will frustrate many students' searches for meaningful career possibilities.

The process of exploring vocational options and eventually making a career choice is virtually inevitable in a complex society offering specialized career opportunities. Liberal arts education has traditionally sought to delay career choice, and in doing so has often denied students the opportunity

to achieve self-awareness and personal growth in significant areas of their lives. Career exploration can constitute a legitimate portion of the broader liberal arts experience, and liberal arts education, properly organized and supplemented by work-related experiences, can promote effective career choices. Career exploration within the liberal arts should emphasize the role of careers in fulfilling liberal arts aims. Self-awareness, opportunities for personal growth, and the intrinsic worth of interesting occupational tasks should be stressed. Exploration should initially consider the array of options that utilize broader liberal arts competencies rather than the requirements of specific positions, and should provide opportunities to test interests and abilities in work-related tasks.

Alternative Models and Necessary Elements

Major Propositions

This analysis of the issues supports the original proposal that liberal education and career preparation can complement and strengthen one another, particularly if the relationship is based upon the four propositions presented at the beginning of the essay:

1. Liberal arts education must accept responsibility for transmitting the essential specialized knowledge and skills required for entry-level positions and must provide a foundation for a lifelong pattern of career development.

2. Liberal education must become more competency based and must offer opportunities for credentialing important career-related competencies.

3. Career development for undergraduates should be part of a broader program of personal growth emphasizing the important human qualities promoted by the liberal arts.

4. Liberal arts faculty should accept the responsibility for linking their disciplines to the broad career tasks pursued by students and should demonstrate the contribution that the "liberating arts" can make to these tasks.

Alternative Models

These proposals may be implemented in a variety of ways adapted to the distinctive characteristics and aims of individual institutions. Three broad models, however, represent the several possible levels of integration between the liberal arts and career preparation: (1) the *traditional preprofessional model* which considers liberal arts education as preparation for more specialized professional and graduate education; (2) an *integrated model* in

which career preparation and liberal arts are pursued simultaneously in virtually all course programs; and (3) an intermediate *linking model* in which the traditional liberal arts are supplemented by direct career-related experiences and an important but relatively small number of linking courses. Although each approach has potential for certain institutions, the linking model appears most appropriate for liberal arts institutions, particularly the independent liberal arts college.

The preprofessional model. This model represents a long-standing tradition in liberal arts education and has been particularly appropriate for the liberal arts units of more selective universities and for highly selective independent colleges. Both types of institutions are defined by Jencks and Riesman (1968) as "university colleges" because of the major preparatory role of the liberal arts for graduate and professional components of the university. Liberal arts education is assumed to lead to a career, but the liberal arts accept no responsibility for career preparation other than to develop the academic knowledge and skills required in advanced curricula and to promote the general qualities of a liberally educated person deemed important by graduate and professional programs. Linking of the liberal arts and career tasks is the responsibility of the postbaccalaureate sector, a position which maintains the autonomy and purity of the liberal arts experience.

This model offers little assistance to the student who is not continuing immediately to postbaccalaureate education. It is also a model in which the autonomy of the liberal arts experience is often more imagined than real. Examination of student transcripts in "preprofessional" liberal arts programs shows that the liberal arts content is dictated to a considerable degree by professional programs such as medicine, dentistry, and business. "University colleges" send an extraordinary percentage of their graduates into Ph.D. programs in the liberal arts and sciences. The liberal arts experience in many cases has become highly specialized and vocational, preparing students to pursue advanced study in a selected field without particular regard for the breadth of experience and humanizing influence expected in liberal arts courses. Selective liberal arts colleges have become vocational schools as much as others bearing that title. This exacerbates the problem of career preparation because the market for Ph.D.'s has declined and the liberal arts are suffering the same employment problems as other fields.

The sizable costs associated with such programs is also bringing about modifications in the preprofessional model. Both the student and the postbaccalaureate institution must bear the direct cost of additional schooling to obtain the necessary career preparation. The employer bears the cost of

hiring someone with a postbaccalaureate degree who may be no more economically productive than the person without such a degree, and society bears part of the cost of additional schooling as well as the inflationary cost of an "over-educated" individual. Students are turning away from pure liberal arts programs which necessitate one or two years of additional education to obtain appropriate career credentials, particularly when such credentials may not lead to increased economic rewards. Professional schools are returning to an older pattern of permitting entry to fields such as medicine, law, and dentistry prior to receiving the baccalaureate degree. Some universities are consolidating undergraduate and professional work in fields such as medicine, where a number of six-year programs have been established. These are designed also to attract capable undergraduates to the university and thus pose a threat to the free-standing liberal arts college whose students may not be able to enter such self-contained programs. Even business schools are introducing streamlined M.B.A. programs which can be completed in one year by students who take appropriate prerequisite courses as undergraduates.

Employers are refusing to pay the additional cost of occupational master's degrees when they can hire persons with a bachelor's degree in that field at far less cost. The M.A.T. has fallen from favor as an entry-level degree for teachers because school districts refuse to hire inexperienced M.A.T. degree recipients at a higher level of salary than they would have to pay a beginning baccalaureate-level degree holder.

Some institutions, however, especially highly selective colleges and the liberal arts units within universities, should continue to follow the preprofessional model. Such institutions should communicate their intentions to students so expectations regarding career preparation are realistic. Also, if the institution accepts the personal development of a student as a worthy goal, opportunities for career exploration through field experience and other activities should be offered as part of the broad set of developmental opportunities. Development of career competencies may be postponed without difficulty in some instances, but students should be given the opportunity to explore and determine their own futures at the time such questions become meaningful and important to them.

An integrated model of career preparation in the liberal arts. The other end of the career preparation spectrum in the liberal arts is represented by a model that completely integrates the two elements. Such a model would incorporate opportunities for career exploration and the development of competencies in all liberal arts courses to the extent that the content of such

courses facilitates these aims. Career-oriented courses and majors would be offered, as would field experiences designed to develop and credential important skills and to provide systematic opportunities for career exploration.

Such a model incorporates most of the tentative suggestions developed in this essay, but its apparent total commitment to career preparation makes it unrealistic and inappropriate for most institutions. The liberal arts and practical affairs should exist in creative tension. Such tension can be maintained only by recruiting and supporting students and faculty who are skeptical of career aims, yet accept such aims as part of the mission of the institution and as desirable for others. Also, a completely integrated model is inappropriate for the student who does not desire to pursue career goals during the undergraduate years. Finally, it would be unrealistic to expect to attract faculty and students completely committed to such an ideal. Conflict and compromise are inevitable and should be anticipated in the design of educational programs.

A linking model. The third alternative is an intermediate model that overcomes many of the weaknesses yet retains a number of the desirable features in both the preprofessional model and the complete integration model. This "linking" model of career preparation in the liberal arts offers some integration of the two elements but retains the traditional liberal arts as the core of the student's educational experience. In this model the student fulfills the traditional liberal arts requirements for general education and an academic major. The student also engages in one or more field experiences designed to explore career interests and abilities, completes several courses designed to develop entry-level skills and knowledge, and serves an internship which develops new skills and credentials achieved competencies. The linkage between the liberal arts and career preparation is achieved in large measure through the several courses which introduce and develop broad career knowledge and competencies within the theoretical framework of the underlying liberal arts disciplines, and which link the basic disciplines and professional knowledge. Such courses should emphasize the ways in which humanistic and other liberal arts perspectives can be brought to bear upon professional problems.

This model is not unknown in liberal arts education. It describes a model for teacher education at its best within a liberal arts context and has been employed successfully in a number of institutions. The key to its success as a liberal arts model, but also the most frequently ineffective aspect of the program, is the linking courses. Too often these are taught in small institutions by liberal arts faculty who lack background and interest in the appli-

cations of their disciplines, and in larger institutions by specialists who have relatively little interest or background in maintaining strong ties with the liberal arts. (The so-called foundation and methods courses in teacher education are almost always evaluated as least effective by students.) Teaching such courses is difficult and will require retraining of both liberal arts and professional faculty. Nevertheless the model does work and can be extended to other occupational fields, and could be used to introduce more professionally oriented majors into the liberal arts curriculum.

Necessary Elements in Career Preparation

Courses, experiences, counseling. Regardless of the model employed, effective career preparation within the liberal arts requires three broad elements: (1) several levels of courses which present basic theoretical knowledge within a liberal arts context, which present basic professional knowledge, and which develop the minimal practical knowledge and skills required for entry-level positions; (2) internships and field experiences which permit career exploration and develop and credential important skills; (3) appropriate career counseling and placement. These will be discussed, and this essay closes with an analysis of the possibility of introducing more career-oriented majors into liberal arts institutions.

Career-related courses. While a study of the liberal arts offers a most effective foundation for career preparation in a variety of fields, disciplinary knowledge cannot substitute for professional knowledge. (Even where professional implication can be deduced from basic disciplinary knowledge, it is unrealistic to think that undergraduates will be able to draw such inferences.) Liberal arts knowledge, however, provides a theoretical rationale and breadth of perspective for professional-occupational knowledge. Much of professional knowledge is based upon disciplinary conceptions and can be comprehended and manipulated most effectively within a disciplinary or multidisciplinary framework. The disciplinary base can be used to summarize and explain professional principles even where the conceptions cannot be deductively inferred from the discipline. This is true especially in social- and behavioral-science-based occupations, where the underlying disciplines themselves function often as summarizing frameworks rather than as deductively related theories.

Emphasizing the liberal arts as the foundation of career preparation also reduces the possibility of making narrow technical decisions without regard for broader implications and consequences. The fundamental liberal arts role in all problem solving and professional decision making is to free the decision maker from narrow bias and ignorance of potential conse-

quences. To fulfill this "Promethean" role, however, relevant policy questions must be brought within the framework of liberal arts education and the underlying disciplines must be linked conceptually to professional knowledge.

The earlier analysis of the relation of theory to practice suggests that effective career preparation within a liberal arts context requires the introduction of occupational knowledge at three different levels: basic theoretical, professional theoretical, and professional practical. Basic theoretical knowledge would include the basic science courses found in preprofessional as well as professional programs and the broader liberal arts courses designed for nonspecialists. The relationship of basic science to professional knowledge should be considered in these courses so that specialists and nonspecialists alike understand the relevance of science to technological applications. Such understanding is necessary because, in both public and organizational policy considerations and in relationships between individual clients and professionals, many crucial decisions must be made by nonprofessionals, often with conflicting professional advice. The special role of the humanities in clarifying and providing a basis for professional decisions should receive major emphasis in both science and humanities courses. Preparing generalists to exercise this decision-making responsibility and to relate to a wide range of specialists in other ways may be one of the most important functions of liberal arts education.

The second level of the course structure and of knowledge is concerned with the theoretical dimensions of professional knowledge itself. Most professions have developed one or more systems of professional knowledge which, although related to the basic disciplines, involve additional conceptions and cannot be deduced directly from the underlying liberal arts. It is this type of career course that could effectively link the liberal arts and career preparation, and it is this type of course that appears to be missing in most liberal arts programs.

Many institutions have tried to introduce advanced internship experiences directly following liberal arts courses. But students lack the additional knowledge required to utilize the liberal arts effectively or understand the professional systems. Thus, they may eventually acquire "practical" knowledge in the field, yet remain technicians because such knowledge is not linked to the underlying disciplines or placed in a larger humanistic perspective. Replacing some of the specialized undergraduate courses which only serve to prepare students for vocations in liberal arts fields with introductory courses related to professional application would

seem to be a reasonable way to serve the vast majority of students who will not continue studying in the discipline itself.

In addition, professional bodies of knowledge bear sufficient relationship to the basic disciplines and possess sufficient conceptual richness to be worthy objects of study in themselves. Introductory theoretical courses in fields such as engineering science, computer science, clinical psychology, and management could prove desirable additions to many liberal arts programs.

The third level of professional knowledge, professional practical, generates considerable debate when proposed as a component of liberal arts education. Practical knowledge involves noncognitive skills that are regarded as narrowly vocational if taught without reference to theory.

The irony within liberal arts education is that such practical knowledge has been taught for many years in laboratory science courses, a practice which makes science majors much more immediately employable than their social science or humanities counterparts. Practical laboratory procedures and techniques are taught as a part of pure science, and while academic credit may be reduced for laboratories, technical procedures are nonetheless considered a fundamental part of scientific education. Similar techniques such as the clinical competencies described earlier could be taught in social and behavioral science courses, and to a limited degree in humanities courses as well. Without some practical knowledge, other career preparation efforts in liberal arts education will prove ineffective because students will lack the final link to occupational effectiveness and will not be able to credential the more advanced conceptual competencies they have developed.

Career preparation within liberal arts education should permit students to develop a limited number of competencies to the level of proficiency required to compete successfully for entry-level positions in their chosen fields. Analysis of learning curves in the development of practical skills reveals that substantial initial gains may be made in a rather short period of time, after which longer periods of experience are required for further refinement. Liberal arts education should assume responsibility only for the development of initial competency, with further refinment being the responsibility of the occupation or of advanced professional training.

As described earlier, the basic skeleton of the three-level "linking" model of career preparation is found in many liberal arts colleges in the form of

teacher education programs. Preparation of elementary and secondary teachers has long been considered a legitimate function of the liberal arts, and teacher education programs at their best can meet all the criteria established for career preparation in the liberal arts. The position advocated here is that the same principles of educational program development be extended to other career areas.

Development and credentialing of limited career competencies seems to be the most feasible approach for institutions wishing to retain their identities as liberal arts colleges. Following the teacher education model, the student would not have to major in the area in which credentials are being sought. Career-related competencies might be developed through relatively brief sequences of perhaps two to four courses, including a field experience. Data from the College Placement Council and other sources continues to indicate that employers will favor liberal arts graduates who possess at least the specific competencies and skills to qualify them for entry-level positions. The three-level "linking" model of career preparation attempts to respond to such possibilities while acknowledging that the liberal arts experience should continue to constitute the core of undergraduate education.

Field experience. Although practices vary considerably, virtually every institution now offers some form of off-campus, experiential-based learning. The role of experiential learning in liberal education, however, has never been clear, and field experience has usually been placed at the periphery of the curriculum. This in turn has been a major deterrent to career preparation in the liberal arts because of the central role of experience in linking theory and practice.

Field experience fulfills several major functions in career preparation and may require several different types of activities:

1. *Opportunities for career exploration.* This involves the observation of occupational activities and the initial testing of interests and abilities against those activities. Exploratory experiences should offer access to a reasonable range of occupational tasks, should expose the student to appropriate role models, and should permit involvement in those tasks, although obviously not at a professional level. A number of institutions have implemented short-term field experiences of perhaps a week or two offered during vacations, often in cooperation with alumni working in that field. Other institutions offer programs involving several hours a week in locations close to campus.

2. *Opportunities to develop career-related competencies.* Many competencies can be acquired initially in traditional classroom settings and in laboratory and simulation exercises. Higher education, with its emphasis upon the theoretical, tends to leave skill development to internships, even when skills could be much more efficiently developed in the classroom and laboratory. Some competencies, however, particularly those involving combinations of more simplified skills and those requiring sophisticated technologies or interaction with others, can best be developed in actual practice situations. Competency development through field experience requires that the setting be organized as educational, if only to protect clients and others from the initial failures by students. Liberal arts programs lack the organized clinical settings found in professional fields such as medicine and counseling, and business and government are less oriented to training student interns, especially where systematic learning may be required.

3. *Opportunities to credential career-related competencies.* The third, and in the present labor market, perhaps the most critical function of field experience is to credential career-related competencies in settings where the competency is more likely to be accepted at face value as contributing to occupational effectiveness. As indicated earlier, credentialing of competencies is at a relatively primitive stage of development. Under such conditions, even quite informal evaluations from actual work situations carry more "face" validity than do elaborate evaluations from other situations. This suggests that credentialing is best accomplished in extended internships of at least several months' duration, although not necessarily full-time, where students can demonstrate proficiency in actual occupational tasks.

To be successful, field experience must be adequately planned and supervised. Participating students must attain the prerequisite skills needed to function in the field setting before the experience actualiy begins. Employers must be willing to treat field experiences as primarily educational rather than as added assistance. Under these conditions field experience can provide career exploration and the development and credentialing of appropriate competencies for career preparation in the liberal arts.

Career counseling and placement. Career counseling and placement represents a necessary but by no means sufficient condition for effective career preparation. Too often it represents the only effort by liberal arts colleges to solve the employment problems of their students. Such efforts usually assume the problem is due to a lack of understanding of the adequacy of a liberal arts degree either on the part of employers, for which vigorous placement efforts are the answer, or by students, for which counseling is re-

quired. If the analysis of the problem presented earlier is substantially correct, emphasis upon career counseling and placement as *the* solution to career preparation is likely to result in failure.

Actual counseling may not be needed by the vast majority of students. Holland (1974) estimates that only 30 percent of the population needs such counseling, making it inappropriate to plan programs of career preparation with individual counseling as the core. In many institutions career counseling has now been broadened to emphasize the brokering of appropriate resources such as contacts with persons in the student's field of interest, and other opportunities for career exploration. For those who need it, however, institutions should provide adequate vocational and psychological appraisal and counseling by qualified personnel.

Similar changes are occurring in the placement function where, in a buyer's (employer's) market, preparation of credentials and instruction of students in how and where to pursue employment opportunities has replaced the more limited perspective of making arrangements for on-campus visits by personal recruiters. The link with career counseling must be strong, for successful placement often involves the accurate appraisal of how the particular combination of abilities developed through the liberal arts experience may best be used in the current employment market. Early contact with the student, well before the senior year, is required to assure that appropriate competencies are developed and credentialed.

Career counseling and placement is often the place in the institution where the reality of the job market is impressed upon the student and where straightforward advice is given in how to deal with that reality. A fundamental problem is that career counseling is usually divorced from the rest of the educational program, particularly from academic advising. Too often the student's academic program is planned in conjunction with an adviser who is unaware of possible areas of employment or of how to plan a program to exploit those possibilities. It appears likely that the uncertainty and apprehension of liberal arts students regarding employment stems in part from the lack of appropriate information among faculty about job possibilities and career planning for their students. Academic advisers must assume more responsibility for career planning in most institutions. Career counseling and placement functions may be delegated to specialists to some degree, but unless the basic academic program of most students is planned with potential employment as one necessary condition, other career preparation efforts cannot succeed. One of the most important functions for career counselors and placement officers is the education of faculty for effective

career advising and the communication of current information regarding the job market.

Occupational Majors

For a variety of reasons, including pressures from students and from external forces, many liberal arts colleges have introduced or are considering the introduction of professional majors. Some of these can become a legitimate part of liberal arts education providing certain conditions are met. The primary goal of the academic major is study in depth. A major field of study, then, must provide a rich body of knowledge, capable of yielding continued insights when pursued in depth and worthy of analysis in its own right. Many liberal arts proponents would add the additional criterion that the major be based upon a theoretical body of knowledge, but several fields such as classics and probably history would be excluded if this criterion were strictly enforced. Several professional fields have met the liberal arts criteria for some time. Lawrence Lowell, who reformed Eliot's elective system at Harvard in the early 1900s, favored law as an undergraduate major. (Lowell also advocated that art and foreign languages be excluded as academic majors.) Other fields have developed similarly rich bodies of knowledge, and as Joseph Ben-David has pointed out, "the possibilities for designing and teaching vocationally oriented courses in an intellectually satisfactory way have increased enormously during the last 20 or 30 years" (Ben-David, 1972, p. 50). Professional fields which might be developed as majors in liberal arts colleges include engineering science; computer science; management, including public administration; nursing and several allied health specialties; and criminal justice.

Because the issue of introducing additional majors involves political and economic as well as academic considerations, the following guidelines may facilitate consideration of professional-occupational majors within a liberal arts context:

1. Regardless of career possibilities, the primary criterion for a new major should be the liberal arts standard of a field capable of sustained analysis in depth and worthy of study in its own right.

2. Unless licensing or certification prevents it, most career majors should be introduced initially as course clusters or perhaps concentrations within a disciplinary major. Coursework in computer science might be added to an already existing mathematics major, for example.

3. Professiona' majors should supplement, not substitute for, academic

disciplines. A core of faculty in the relevant disciplines should be prerequisite to the establishment of any professional major.

4. Clusters of interrelated professional programs should be established to make the most efficient use of staff. For example, social work and criminal justice, as well as teacher education, might draw upon faculty resources in the social and behavioral sciences as well as applied fields.

5. Professional coursework should be held to a minimum. The question of seeking professional accreditation for programs should be considered with regard to maintaining an appropriate balance in coursework and in the allocation of faculty resources.

6. Professional faculty should be selected for their commitment to liberal arts education and should, if possible, be expected to participate in liberal arts as well as professional instruction.

A Concluding Note

Because of fundamental differences in intention, the relationship between the liberal arts and the world of work will always be somewhat uneasy. However, with careful planning, the tension can be creative and can enhance the attainment of both liberal arts and career goals. The liberal arts embody the most worthwhile of human ideals and products of human achievement. The world of action, in contrast, is susceptible to all the frailties of the human condition, and the suspicion with which this world is viewed by people in the liberal arts is understandable. But action also provides the only way in which to fulfill many liberal arts ideals, both for the individual and for the larger society. Only as those committed to the liberal arts apply their competence and commitment to the specialized action roles called careers will the attainment of fundamental ideals be made possible. How this aim can best be accomplished is a complex problem and one to which liberal arts education must now devote major attention.

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